

THE NATIONAL WOOL GROWER

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The Future of Our Sheep Industry

(By A. J. KNOLLIN)

WE have arrived at the fiftieth anniversary of our organization, with clean hands, of this I am sure; and with strong hearts I hope: With clean hands, because at this time when combinations of men and capital formed for the purpose of making unjust gains are being censured by our government, backed by public sentiment, we are not subject to criticism. In the conduct of our business we have not conspired together to force down the price of labor. Our labor has been bought in an open market. Labor itself has largely set the price. Nor have we said to the consumer of our products, mutton and wool, you must pay us certain prices which we ourselves have established in order that we may be insured a good margin of profit, but on the contrary we have taken for our products in the open market such prices as the buyers were willing to pay. The price too often has been far below the cost of production. We are not, therefore, at present occupied in an enforced unscrambling of eggs that were scrambled at the expense of public welfare. Our hearts are strong because we know that regardless of the many vicissitudes appertaining to our industry, the many discouragements and disappointments we have obtained results that have added materially to the public welfare. Although our rewards have been small, we have the satisfaction of knowing that our efforts have resulted in bringing increased comforts to mankind. Every pound of mutton we sell means to the consumer healthful and nutritious sustenance, the best and the cheapest meat obtainable. Every pound of wool we sell means durable and comfortable clothing at a reasonable price.

When we consider the benefits to humanity resulting from sheep hus-

bandry and know the habits of the sheep it is indeed marvelous that such wonderful results are obtained. Sheep subsist largely by gathering from the waste places. On the farms they glean the fields after the harvest is taken, they clean up the weeds and such vegetation as may grow in rough inaccessible places. They not only utilize this waste but they improve the land, increasing its fertility. On the range flocks glean from the rough



A. J. Knollin

canyons, from the mountain tops and from the deserts, where cattle and horses will not go. They have proven of untold value in clearing the forest of vegetation, thereby preventing forest fires. Sheep have afforded our early settlers a market for their hay and grain from the time that courageous men and women first left New England shores, moving westward, establishing their homes in the forest, on

the great plains and in the mountain valleys. Without railroads or wagon roads, many of these hardy pioneers could not have stayed excepting for the revenue obtained from sheep husbandry. We still have large areas of country too far distant from transportation from which the products can be profitably marketed, except on foot, and there is no animal with which this can be so economically done as with sheep. Even where railroad facilities are convenient, where land has become valuable, where the principal crops are sugar beets and grain and alfalfa, we find sheep still on the job of conserving waste. Stubble fields are gleaned of scattered grain, troublesome weeds are kept down, the aftermath of the meadows are utilized, also waste from the beets. The tops left in the field, on the pulp from which the sugar has been extracted, are by sheep converted into wool and mutton. This also is true of the surplus hay, a crop very necessary in a proper system of rotation where the fertility of the soil is to be conserved, and maximum yields harvested. I know that I am conservative when I say that in this way, largely by conserving waste, sheep contribute to our national wealth one hundred millions of dollars annually, one-fifth more than the annual value of our gold output, Alaska included.

Sheep are timid animals, a prey to predatory animals. They must be closely guarded and although naturally healthy, their nervous systems are extremely sensitive to ailments, and therefore they require close attention. Today, as in the days of Abraham and when our Savior was born, the shepherd must be close to his sheep to guard them from harm and to lead them safely over their feeding ground or properly prepare their feed. We may assume that for each one thous-

and sheep of our fifty millions one man's time is fully required. Therefore employment is afforded direct for 50,000 men, with probably as many more employed indirectly. Shearing and lambing require extra help. Transportation of sheep, lambs and wool affords large revenue for our railway companies. As we follow our product we find labor employed on every hand until the time the mutton is served at our tables and the wool prepared as clothing for our use and comfort. This has been our work, fellow-wool growers, whether or not we have received just rewards we are conscious of having labored for the interest and welfare of humanity in a self-sacrificing way.

We are at this time only disturbed in our political life by a public sentiment against strong combines of men and capital working for their own benefits as against public welfare, but we have also an unrest which is generally termed Socialism. There is an aggrieved feeling on the part of those who have little against those who have acquired wealth. A feeling that the benefits possible to obtain from God's storehouse, the universe, belongs in like measure to the prudent and to the improvident, to the industrious and to the sluggards. In the former case I believe that all right thinking men are agreed that selfish and arrogant powers should be curbed. That the constitutional rights of every man to have an equal opportunity, be safe-guarded. In the latter case I believe that they who are prosperous should be patient and helpful towards those less fortunate, emulating those great truths stated in Proverbs in these words: "Hatred stirreth up strifes; but love covereth all sins." "He becometh poor that dealeth with a slack hand; but the hand of the diligent maketh rich." The following lines fit these precepts and emphasizes the need of following them in our every day life, provided we would make them a real help to ourselves and others: "To say well is good, but to do well is better; do well is the spirit and say well is the letter. If do well and say well were fitted in

one frame, all were one, all were done and got were all the gains."

Although we frequently need criticism to stir us up, we usually resent it. I am not here to mar this happy anniversary by criticism of anyone. I did not come with a chip on my shoulder, but rather with a hearty good feeling for everybody. This includes our friends engaged in the lines of industry upon whose good graces and services we are dependent for the successful issue of our business.

I desire to make a few suggestions, which I trust will be received in the spirit with which I make them. Not in a sense of criticism, but from a strong desire that a great industry should be benefited. This little story presents my text: "A clergyman had a church near a baseball field. Sometimes on Sunday the language of the church floated out onto the baseball field. That was all right. But at other times the language of the field floated through the windows of the church, and that was not so desirable. One Sunday the clergyman was in the midst of a sermon. He came to the point where he said: 'and fifthly, What shalt thou do to be saved?' Like a good speaker, he paused for a moment before driving home his point, and just then from the ball field came this: 'Slide, you rummy, slide.'" In baseball parlance "slide" means do your best; use a supreme effort; get there.

The sheep industry of the United States must be saved. We sheep owners must make some individual and collective "slides." We should give breeding more careful attention. We should safeguard against severe losses by providing an adequate supply of winter feed. We should guard against overstocking our ranges. If we are to grow strong constitution sheep that will produce the maximum amount of wool and mutton they must not be permitted to run down badly in condition. We must give more attention to producing uniform wool. This can be done by localizing the breeds best adapted in different sections. Where the conditions are favorable for growing mutton lambs, the type of lamb

that sells best on the market to the slaughters, if fat, and to the feeder is not, should be bred; because they will pay best. Where conditions are not favorable for producing fat lambs desirable feeders can be grown. A type of lambs that will fatten quickly and make good gains on a minimum amount of feed is what our Eastern feeders want, and what the feeders in the West should have if they succeed. Too often never-do-well culls are put off on the feeder who is just beginning the business and he soon becomes discouraged. A different system of breeding is necessary where useful breeding ewes are to be produced. Breeding is a science that is more generally understood than followed. We are not inclined to work along the lines of our best knowledge, but rather to follow the lines of least resistance. In the matter of breeding we have an opportunity of making a big "slide," my friends. We should have an ideal to work towards. Cull out such breeding ewes as we are not pleased with. We should never see a poor ewe in our breeding flocks the second time. Cull her out the first time you see her is the better way.

The ram is considered half the flock; therefore it is as important to use great care in selecting a ram as in selecting the ewes. We frequently feel so poor that we deem it unwise to buy high cost rams, or perhaps our banker so thinks. This is another opportunity for a "slide," because the best in the long run will prove the cheapest and the results obtained will be far in excess of the difference in first cost. In the matter of packing and selling our wool, we are a long way from the home plate. At first thought it seems useless to attempt to "slide" through. "Slide," as used here, to be considered in the baseball sense, and not as wool dealers would define it, when they say "the grower attempts to slide one over on them" by careless methods of packing. The dealers understand the situation and do not worry; they demand a wide margin for their safety when they "buy a pig in a bag."

If we expect to secure in our home

markets as much as foreign wool brings, we must place it before the manufacturer as well graded and as attractively packed as the foreign wool. We must either grade and pack our wool in a right way or dispose of it to dealers who will so handle it. If we do the work we have a nominal expense; if the dealer does it we not only pay the expense but we also pay the dealer's profit. The point is this: the manufacturer will not be interested in our wool at first hand to any extent until we grade and pack it properly. The majority of our clips are small and the character of the wool varied, therefore, in order to make up lines of wool to suit the different purposes of the manufacturer, and in quantity to make it worth while for them to buy at first hand, it is necessary that we work together. By co-operation in breeding with the view of producing uniform wool in certain localities and co-operation in grading and packing the wool and in marketing same we will, I believe, obtain for our wool at our home manufacturing centers prices prevailing in the world's markets with the expense of bringing in foreign wool added.

The same conditions relative to wool will, I think, obtain to mutton. Our high class mutton will have an advantage in our home markets over imported mutton, but foreign competition will make hard sliding for our common grades.

Can these improvements be brought about? And if so, how? The desired results can be obtained by working together. District associations should be formed, a small tax levied on the sheep in such districts, would make it possible to employ a trained supervisor or advisor, whose duties it would be to gather facts relative to results being obtained from different methods in vogue. That which was found best could be generally adopted. Experimental work in breeding and feeding could be conducted. Shearing and packing of wool properly supervised. Records compiled of the sheep and lambs to be marketed. A central office could be maintained, supported by the district organizations, to which

they would report the volume of sheep and lambs to be marketed from their respective districts. I am confident that under such a system great improvement would be made over present methods. It is seldom indeed that our great central markets receive an over-supply of sheep and lambs, take the year through. There are, however periods of congestion when great sacrifices in values are made. We also have periods of light supplies when keen competition sends values up. It is, however, the large numbers that are sold on the down markets and the few on the up markets; an unprofitable condition for the growers.

There are many other advantages to be derived from co-operation that I may only outline briefly. Growers not located for producing mutton lambs could make a specialty of producing choice breeding ewes to be sold to the mutton growers, also a desirable class of feeding lambs to be sold to the farmers in their districts. Fattening sheep and lambs is a new and valuable phase of western sheep husbandry that should be encouraged. Rams could be purchased for the whole district. By buying in large numbers closer prices could be made and a saving in expense of buying and transportation. I think buck raisers would be more careful in their breeding, and in conditioning their rams for service did they know that they must sell to the representative of a large number of owners; to a man who would have a trained critical eye for defects that are generally overlooked by the individual buyer.

This paper must not be too long, therefore, we will pass to another subject, but the matter of co-operation, fellow wool growers, is very fascinating to me and I would like to go further into the possibilities for good.

What shall I say regarding railway services cannot I am sure be construed by our friends the railroad men, as hostile criticism. We realize that their problems have been many and difficult of solution. Upon the whole, we will admit that the services of the transporting our sheep and lambs to market has been wonderfully improved

in the last five years. Transportation is of great importance. The success of our industry largely depends upon getting our sheep and lambs to market in good, sappy condition. Our railroad men who have to do with live stock, now realize, I think, that live stock is perishable freight and especially lambs. As from year to year shipments of lambs increase, as they will, the problem of adequate feeding facilities in transit must be solved. Suitable pasture land rightly located is not easily obtained. The solution of this problem to my mind will be a better stock car; a car with springs and couplings similar to passenger coaches, so equipped that passenger time can be made. This would eliminate the necessity of greatly enlarged feeding facilities, there would be fewer stops and less time required on pasture to recuperate exhausted animals before they could be marketed. Our freight rates are high enough to justify this better service, and such service in the long run, I am satisfied will prove more profitable to the railway companies. The elimination of two pounds per head excessive shrinkage on the twelve million sheep and lambs marketed each year, a minimum possibility, at a market valuation would mean the saving of \$1,680,000 per annum. Whether the producer or the consumer be the ultimate gainer matters not, it is a waste that should be conserved. The present methods of handling overcharges and claims for damages are certainly wasteful of both time and money, and extremely aggravating to shippers. I will mention two cases that I have knowledge of. A train of sheep loaded in large cars to the last feeding station and there loaded out in smaller cars, made it necessary to use an extra car. It required fifteen months to get this overcharge refunded. A shipment of sheep was loaded in single deck cars with the understanding that they would be transferred in transit to double deck cars and that the double deck rate would apply. The single decks were billed at 17,000 pounds minimum. They were transferred to double decks and arranged but when they were de-

livered the rate was assessed on 34,000 pounds minimum instead of on 23,000 pounds, the minimum weight for double decks. The overcharge was about \$4,800 and it has now been held about three months, and no one knows when it will be refunded. The company delivering the sheep claim they have no public tariff to apply to such billing and, therefore they would be subject to a fine from the Interstate Commerce Commission if they refunded the overcharge without the commission's order. In so much as they have no published tariff on 34,000 pounds minimum double deck cars, I think the position taken is far-fetched and reprehensible. In the matter of claims, although evidently at fault settlement is delayed indefinitely. Frequently the claimant is forced to resort to the courts, and expensive and tedious procedure. When judgment is rendered favorable to the claimant on unrefuted evidence, new trials are obtained and judgments appealed. In the final outcome there is little left for the claimant, excepting the hope that having at least proven the justice of his claim he will receive better service thereafter.

Facilities for handling sheep at our great market centers have been improved materially by the stock yard companies during the past two years. A large volume of business can be well handled. It would be a great help, however, to railroads, stock yards and commission men if the week receipts could be more uniformly distributed. For three days of the week receipts are excessive, making it impossible at times to handle all consignments promptly. It would be much better for all concerned if the distribution could be made over five days of the week. The remedy must come through co-operation.

The facilities of our slaughtering establishments keep well apace the fast increasing demand for mutton and lambs. Our slaughters have built up a wonderful distributing system which places the mutton and lambs that we produce before the consumers in an attractive condition. They have established car routes whereby meats

are delivered in the smaller towns at regular intervals. The buyers of our sheep and lambs are keenly alive, I am sure, to the welfare of the producers of meat and also to the consumers, and it is their study to handle the vast amount of business incidental to our meat supply economically and with reasonable profits to themselves. We have much to be thankful for in having our great cash markets, prepared at all times to take our offerings.

A panacea for curbing the trust was found by our present administration in free trade; however, the big interests, the so-called trusts, were not stripped of protection to the very nerve centers as were the wool growers and the farmers, who, in the very nature of their business never have had nor never could form a trust. The producers of our country, I am sure, will not soon forget the injustice done them.

I firmly believe that the rapid development of our country and the large measure of prosperity we have enjoyed, were fostered by the protective policy we have so long followed. Undoubtedly readjustment of the tariff was needed to meet changed conditions, but there was no necessity for the radical changes made in the tariff on the products of the ranchman and farmer. Should the results looked for be realized, cheaper living for the consumer, it will be at the expense of the producer, and prove his undoing and therefore, the advantage to the consumer would be of short duration.

Production of meat animals and food stuffs should be encouraged by every means possible and not discouraged. All who are engaged in useful enterprises are entitled to and require fair wages or profits from which a comfortable living for themselves and their families can be provided with some surplus left with which to bring their chosen work to a higher ideal of perfection. Just a word regarding the new currency law. Although our bankers who have naturally closely followed the bill are not agreed as to the outcome as to whether results will be beneficial or detrimental to our welfare, I am going to be so bold as to

express my opinion. I believe that it will prove a wise measure. Our banking system as at present conducted has two interests. The financial, having to do with money, and the commercial, having to do with trade and commerce. In times of stringency naturally bankers look first to the welfare of the financial (their own) interest. When that is safe-guarded the commercial interests are given such help as the unused reserved funds will admit of. Under the new law I believe it will be possible for the banks to furnish a larger measure of assistance to the commercial interests, when they require help, without endangering their financial interests. In connection with the co-operative suggestions I have made, we should, my fellow wool growers, work out a system of credit protection that would fit our business, that would be helpful to us individually and collectively.

In the National Warehouse and Storage company we have, in my judgment, a splendid start toward solving our wool problems. In order, however, that this company may build up a completed structure for our use they must have our support. The company is doing a splendid educational work, it will be a great calamity to the sheep industry should its work in laying a strong foundation for broad usefulness be lost.

BAD WEATHER IN WYOMING.

We are sorry none of us could be present at the National Wool Growers' meeting at Salt Lake City, but weather conditions around Laramie were such that it was impossible to get away. Sheep in southern Wyoming are still on full feed, and it is going to be very hard on our stockmen in this particular part of the state.

They have done more feeding this winter than ever before in this part of the country and no let-up is in sight until we get real thawing weather. Allow me to congratulate the National Wool Growers' Association on the successful convention which it held.

J. W. KING,
Wyoming.

AMERICAN WOOL BEST.

To Mr. Hagenbarth:

Recently I saw in the paper that you intended to dispose of part of your sheep holdings and purchase more cattle. Probably you feel you can use your money to better advantage that way, but I hope that you will reconsider, as I believe that in the near future our wool will regain its lost value. It's superior wearing quality over any other wool in the world will eventually be recognized. I refer of course, to the clips from well bred sheep carefully handled and cared for, but not to the mongrel stuff of careless growers that give a bad name to all of our American wool. Wool has never had a fair show. Since the growers in 1865 first presented their claims for adequate protection culminating in the tariff of 1867, which was on a wrong basis, it has given the manufacturer too large a compensatory which he has enjoyed ever since.

I have spoken about the value of American grown wools to Dr. McClure, and have also obtained some testimony from several of our largest manufacturers. However, the intrinsic value of our wool is to a great extent lost by the manner used in putting it up. In shearing, the rams' wool should be kept separate and the wool should be graded according to length and quality. The fleeces should be tied with paper twine and well shaken. No fribs, skirts or leg pieces should be wrapped with the fleeces. If our wool was handled in this way it would compete successfully with the best wool of the world. If I could, I should be glad to over-see the shipping and packing of some of our larger clips, and if the growers would let me, I would gladly select men that I could send to them to direct the work.

In 1855 I entered the wool business as a boy. At that time the XX Ohio brought 60 cents per pound, now it bring 26 cents. Combing machinery has so changed methods that fine wools have lost their comparative value. At the time I started in the business the clip of the United States amounted to

about sixty million pounds. Ohio was the leading wool producer. Ninety per cent of the wool it produced was fine wool. If we now had the same demand for fine wool in proportion to population that we had then, such wool would bring \$1.50 per pound. When I started in the business, quarter blood unwashed was worth 17 to 18 cents. Today it is worth 22 to 23 cents, and it will be higher if it is handled by the growers in the way I suggest.

Probably I will never have any financial interest in wool or manufactures of wool again, but I regard the sheep interests not so much as to the profits to the grower, as its value to the country at large. If our people are clothed with American grown wool, they will be the best clothed people in the world, as they have been in the past, whenever American wool was used.

I regard every careful woolgrower as more than a money-maker. He is a boon to his country, a man helping his fellow men to more comfort and happiness and I hope their numbers will never grow less.

ED. GREEN,
Philadelphia, Pa.

WITH OUR SHEEP ADVERTISERS.**Hampshires.**

On another page of this issue will be found the advertisement of Hampshires offered for sale by J. Nebeker & Sons of 154 North First Street, Logan, Utah. Mr. Nebeker advises us that his breeding rams were imported by Cooper & Nephews, and are from the celebrated English flocks of Cole and Flowers and Stephens. We are also advised that most of Mr. Nebeker's ewes are imported or from imported flocks. This firm is now booking orders for registered and high-grade yearling or ram lambs, and solicits correspondence from prospective purchasers.

Bred Ewes.

Malone and Truchot of Agawan, Montana, advertise in this issue 2,500 bred ewes. The ewes are two-year-olds and are bred to lamb early in May. These ewes are half Cotswold-Merino cross, and are bred to registered Shropshire rams.

Cotswolds.

The Heber Land & Livestock company of Salt Lake City Utah, advertise purebred Cotswold rams. This firm is heavily en-

gaged in the sheep business, and deal extensively in range sheep of all descriptions.

Cotswold Ewes.

The Afton Livestock company of Afton, Wyoming, are offering for sale 1,000 registered Cotswold ewes, bred to lamb beginning March 25th. These ewes are bred to choice registered Cotswold rams. They have been range raised and should prove valuable to some one desiring to start a purebred flock.

Hampshires and Cotswolds.

On another page of this issue will be found the new advertisement of Hampshires and Cotswolds offered for sale by J. R. Allen & Bros. of Draper, Utah. Mr. Allen reports to us that he bought from Alex Arnold of Galesville, Wisconsin, the first prize yearling Hampshire Ewe at the Chicago International; the first and second prize ewe lambs; the first prize flock and also the flock that won the Stephens cup. These sheep were bred by Stephens in England and were imported by F. W. Harding. In addition to the above, Mr. Allen purchased Hampshires from the Walnut Hall flocks, including the first prize ram lamb at the International. He also bought from this firm the third, fourth, fifth and sixth prize ewe lambs, as well as the first prize pen of ewe lambs at the English Royal, and seven of the best ewe lambs raised at Walnut Hall farm this year. He also purchased several top ram lambs and sixty-five yearling ewes, a part of which were imported and the balance were out of imported stock. Mr. Allen has brought these sheep to Utah, and they will be ranged on the Uinta National Forest at an altitude of 8,000 to 10,000 feet. It is Mr. Allen's intention to breed flock headers and he hopes to produce stock superior to that imported. Mr. Allen's Cotswolds are well and favorably known, and information relative to them will be found in their advertisement.

Dealers in Sheep and Lambs.

In this issue will be seen the advertisement of Austin Brothers Association of Salt Lake City, Utah. This firm deals extensively in all grades of range sheep and lambs. They conduct a large range business and those interested will do well to write this firm their wants.

NOTICE

David Shand of Manti, Utah, one of our members, is anxious to obtain information of his son Clyde Shand, a practical camp tender.

If anyone knows of his present whereabouts they will confer a favor by sending the information to this office or to the young man's father.

Boston Wool Market

(By Our Boston Correspondent)

DEVELOPMENTS in the wool market during the past month have been something of a surprise to both sellers and buyers, more wool having been sold than was expected, while values are stronger, and in some cases actually higher. This outcome justifies the predictions of some of the more optimistic members of the trade, who have all along insisted that the supply of desirable fine Territory wools was of a limited character, and that there was sure to be an upward turn as soon as manufacturers needed the wool and became free buyers.

Other wool men say that the present strong position would not have been developed, except that holders of wool were ready to accept the market prices and thus allow the surplus to be cleaned up. By the middle of January, most of the leading houses had cleaned up 75 per cent of the domestic wool remaining unsold January 1, in this market, and since that time there has been further large transfers of Territories, both in the grease and scoured, which have brought available supplies down to below a normal figure for the season of the year. Altogether the situation seems to justify a much more cheerful feeling than has been seen in the wool trade for more than a year.

From this it must not be understood that dealers think their troubles all over, or that there is no possibility of sharp competition from abroad for American made goods, for such would not be the fact. There is to be a breathing spell, before the inevitable logic of free trade will have its full swing, and both dealers and manufacturers are preparing to make the most of this during the first half of 1914. That the firmness recently noted in the London wool market as well as in all primary markets, in South America as well as in Australasia, is a Godsend to America cannot be denied. Not only does it make it more difficult for

English and Continental manufacturers to compete with American mills, but it has forced the latter to clean up domestic wools to a greater extent than was expected a few weeks ago.

Unusual activity has marked the wool trade since about the middle of December. This was started by shrewd buyers who saw that the supply of desirable wools was small, and that it would be quickly exhausted if the mills succeeded in obtaining a reasonable share of the business in the duplicate light weight trade, supplimented by the new heavy weight season. One well known manufacturer of high grade goods is said to have gone over the Boston market very carefully, looking over all the choice lots of wool offered. In this way he was able to size up the situation accurately, and his statement that he was astonished at the condition of dealers' lofts is therefore entitled to a great deal of respect.

Other manufacturers took the same view, and some of the largest concerns in the country have been included among those operating during the past month or six weeks. The big worsted mills have been active during the latter part of January, and with the definite opening of the heavy weight goods, the woollen people are expected to come into the market freely. From the latter is expected to come the demand which will clean up the short fine wools, like California spring wools, and others of that class. An indication of this is seen in the speculative movements in scoured wools, recently dealers as well as manufacturers having taken on desirable lots freely.

One unexpected development of the month has been the contracting in Utah and the Triangle. This came about very suddenly, for only a day or two before large contracts were closed it was denied that the movement had any significance, or would amount to anything. Even now the

leading houses concerned say that they were forced into the field, to get wool that they had handled from year to year. As far as could be learned, the first week's operations were confined to three houses in Boston and one each in Philadelphia and St. Louis. The Philadelphia house was reported to be particularly aggressive, though the actual amounts secured by the various houses in difficult to estimate.

From this end, it looks as though high prices had been paid. A prominent wool man, whose house has been a large operator in Utah, said that this contracting was not so much of a gamble as some of the more conservative wool men claimed. The winter is far enough advanced so that the character of the wool is pretty well establish or conditions abroad are so strong as to indicate that the early shorn wools will prove to be pretty good property, provided that they are bought on a reasonable basis.

Apparently it is hoped to repeat the experience of the past two or three years with the Utah clip, which has turned out to be profitable for the buyers, whether contracted for or bought outright at shearing time. Bare lofts and the possession of plenty of free capital have made it easy for the wool houses to operate, and as the new clip wools now appear to be likely to come on a bare market, as far as domestic wools are concerned, it is hoped that they may be turned over promptly and profitably. That 6,000,000 to 7,000,000 pounds of wool should have been tied up in this way in the first week's operations shows that the wool trade has by no means lost its courage, but still cultivates a wholesome belief in the possibilities of the American market.

Recent sales of Territory wools in this market have been made at such a wide variation of prices in the grease as to make it difficult to arrive at any adequate view of the situation. Scoured values appear to have shown

a moderate advance, though in most cases this appears to be result of the poorer selection remaining, and the fact that current offerings have brought fully as much in the grease as the wools earlier sold. Latest estimates of scoured values are 54 to 55 cents for fine staple Territory, 52 cents for half blood staple, 45 to 46 cents for three-eighths blood staple, 40 to 42 cents for quarter blood staple, 50 to 52 cents for choice fine clothing Territory and 47 to 48 cents for average fine and fine medium.

Scoured wools have been very active of late, the weekly sales amount to several thousand bags. Choice fine

for fine, 43 to 45 for medium and 35 to 38 cents for coarse.

Fleece wools are in even a stronger position than Territories. Most of the available supply is in the hands of two strong houses, and they have been enabled to mark up the choice grades $\frac{1}{2}$ to 1 cent a pound during the past month. Transfers have been made recently at 27 cents for Ohio fine unwashed delaine, $22\frac{1}{2}$ to 23 cents for unwashed delaine, $26\frac{1}{2}$ cents for XX and above, $21\frac{1}{2}$ cents for fine unwashed, $22\frac{1}{2}$ cents for quarter blood combing and 24 cents for half and three-eighths blood combing. Current quotation on Ohio fleeces are: Fine

and Geelong reopened stronger and higher after the Christmas holidays, and it is understood that buyers who failed to secure the desired quota of wool before the holidays missed their opportunity. Americans have been buying in a very conservative way recently both in London and in the Colonies, as all foreign markets are above a parity with Boston.

In New Zealand, the situation has been complicated by the strike of the early winter, which delayed holding the sales beyond the usual time. This prevented the offering of the usual quota of New Zealand crossbreds in the last London series, and probably ac-



Cotswold Lambs owned by J. R. Allen & Brother, Draper, Utah

and fine medium wools have sold all the way from 46 to 47 cents up to $53\frac{1}{2}$ cents for choice lots of fine, while off and defective lots have sold at 40 cents and even lower for stained wools. Pulled wools are reported to be well sold up, both in the east and in Chicago, and prices have been advanced, with offerings limited. Current quotations are: Fine A super, 52 to 55 cents for eastern, and 48 to 50 cents for Chicago; A Super, 47 to 48 cents for eastern and 44 to 45 cents for Chicago; B super, 40 to 43 cents for eastern and 37 to 39 cents for Chicago; combing pulled, 46 to 48 cents

washed delaine, $26\frac{1}{2}$ to 27 cents; fine unwashed delaine, $22\frac{1}{2}$ to 23 cents; XX and above washed, 26 to $26\frac{1}{2}$ cents; X washed, 24 to 25 cents; fine unwashed, 21 to $21\frac{1}{2}$ cents; half and three-eighths blood combing, $23\frac{1}{2}$ to 24 cents; quarter blood combing 23 to $23\frac{1}{2}$ cents; half and three-eighths blood clothing 21 cents.

The strength of the position of fleece wools of the finer sort lies in the firmness noted abroad in fine Merinos. London closed very firm, with Merinos 5 to 10 per cent above the last series, and crossbreds also developed unexpected strength. Melbourne

counted for a part of the strength. It was expected that the delayed wools would be offered at the sales to be held in New Zealand after the holidays, but such has proved not to be a fact. The surplus wool has been shipped to London or will be later, and only about the regular amount of wool is being offered in the Colony. This has caused a strong upward tendency, and it is said that New Zealand markets are nearer a parity with London than Melbourne and Sydney.

The sold up condition of the market for domestic wools has forced manufacturers to turn their attention

to foreign wools, and sales show a constant increase. Fine Merino wools are well sold up as far as the old clip is concerned, but the new wools are arriving and are attracting considerable attention from the trade. Values here are on the bottom, and as the wools now offering were bought before the recent rise, they are being sold at prices that are lower than the wools from later sales could be imported for.

HEAVY SHEARING LINCOLNS.

Recently five yearling Lincoln rams were purchased in England for shipment to the Argentine. On account of the existence of the Foot and Mouth disease they could not be shipped, and it is reported that when the five rams were shorn they yielded one hundred seventy-four pounds of wool. This is practically thirty-five pounds each, and there can be but little doubt that the fleece must have been close to two years' growth.

These Lincolns and Cotswolds shear very well when given good care.

Recently Governor Gooding of Idaho sold a number of Lincoln and Cotswold ewes to the small farmers of his section. These ewes were taken to small ranches and of course pastured on alfalfa and kept hog fat throughout the year. I understand that some of them sheared as much as twenty-four pounds of wool last spring, and that another man who had one hundred head of these ewes got an average of sixteen pounds per ewe.

WOOL AND SHEEP IN TEXAS.

Replying to your request of the eleventh of last month, I have to advise you that it is not possible for me to form any definite idea as to whether there are more or less sheep in Texas now than at this time last year, for the reason that there are several different conditions that must be taken into consideration, when trying to form an opinion in this case.

Our State Comptroller's report (just now tabulated) shows that the County Assessors reported, January 1st, 1913,

to our State Comptroller, for assessment, 97,999 less sheep this year than they reported last year (1,536,194 reported this year.) But the percentage of lambs raised last spring, from the number of ewes bred, was greater than during either of the last past several years previous, (owing to more favorable range conditions), but the number of fat sheep shipped to the slaughter houses, since the first of January last, is much in excess of the number annually shipped to the fat markets during each of the last past few years previous. But, at the same time, there has been a considerable many thousand sheep imported into Texas from old Mexico during this year, though probably three-fourths of all the number imported have gone direct to the slaughter houses. Also, there is no definite information as to the number that have been brought into Texas from New Mexico during the last past three months, for fattening for the spring market. During recent years the movement from New Mexico into Texas has ranged from 30,000 to 70,000 head. While it is the general opinion that Texas has less sheep now than a year ago, yet it is merely an impression. As yet there are no ascertained facts to warrant this conclusion.

The sheep stock of this state went into the month of December in high condition, with the pasturage in extra good condition, with an abundant supply of water, for flock needs, throughout the non-agricultural portion of the state.

B. L. CROUCH, Texas.

SPECIAL OREGON

STOCK TRAIN.

Oregon Washington Railroad & Navigation operates three special stock trains out of Huntington, Ore., to Portland every week. These trains are scheduled to leave Huntington at nine A. M. on Mondays, Wednesday and Saturday. Ordinarily such a train contains from 15 to 30 cars of livestock but occasionally an extra has to be operated. Stock from Idaho points is concentrated at Huntington the night before it is to leave for

Portland. The operation of these stock trains is of great benefit to the shippers as it gives the man with one or two cars of stock the advantage of a stock run. These trains make an average speed of about 13½ miles per hour for the run of 404 miles. Oregon has a speed minimum law that compels the roads to make a minimum speed of not less than thirteen miles per hour. In fact it was the passage of this law that induced the railroad to establish these special stock trains. This law was introduced and passed by J. N. Burgess a member of the National Wool Growers' Association. The law has been of inestimable benefit to Oregon shippers, and an effort will be made to amend it so as to require a speed of fifteen miles per hour.

SHEEP WANTED FOR INDIANS

The United States Indian Department have recently issued specifications for the purchase of 8000 grade one and two year old ewes and 200 mutton rams to be delivered at Dulce, New Mexico, between the date of April 15th and June 30th of this year, for use on the Indian reservations in that section. The type of ewe desired may be determined from the following part of the specifications: "The conditions existing there indicate that mutton type of sheep would be preferable, hence preference will be given to that type. In the event ewes of this type cannot be purchased at a reasonable price, bids for native or Navajo breeds will be considered. Bids will also be considered on grade Merino type ewes, but long wooled types will not be considered. Rams of mutton types only will be considered."

Bids for these sheep will be received until 2 o'clock on the afternoon of March 16. Those intending to submit bids are invited to obtain from the department at Washington specifications and blanks upon which the proposals may be submitted.

Where horses are used to transport wool in Australia, the outfit generally consists of four pairs and then a single leader in advance that is driven by single line.

Australia's Artesian Water Supply

(By R. H. HARROWELL)

A very large tract of country in several states of the commonwealth would be practically useless were it not for the fact that artesian water can be obtained in sufficient quantity to maintain stockraising as a permanent industry. Generally speaking the vast areas now served with artesian water are devoid of a natural surface water supply. There are no permanent rivers or creeks, and stockraising would be impossible but for the fact that a huge artesian basin lies far down beneath the surface and it can be tapped with bores, the water coming to the surface by natural pressure.

What is known as the Great Australian Artesian Basin comprises more than one-half of Queensland and extending over the northwestern corner of New South Wales, the northeastern corner of South Australia and the southeastern corner of the northern territory. Practically all this great area of Australia is very poorly served with surface water supplies, and what supplies do exist are so far apart that the great areas in between would be useless for stockraising were it not for the artesian

bores. The total area of the Artesian basin is 569,000 square miles, of which 376,000 square miles are in Queensland, 90,000 square miles in South Australia, 83,000 square miles in New South Wales, and 20,000 square miles in the northern territory.

According to official figures compiled at the end of 1911, there were then in existence in the Commonwealth 2,517 artesian and sub-artesian bores, the figures for each state being New South Wales, 457; Victoria, 42; Queensland, 1,879; South Australia, 80; West Australia, 59. The total depth bored was 2,934,018 feet and the

daily flow aggregated 624,436,000 gallons. The deepest and also the shallowest bores are in Queensland 5,045 feet and 10 feet respectively, but I propose to deal only with the artesian bores here.

Artesian boring in New South Wales dates from 1879, when a private bore was put down on a large pastoral holding between Bourke and Wilcarmia. The first government bore was put down on the west of Bourke in 1884. Of the bores in New South Wales, 21 were less than 500 feet, 88 ranged from 500 to 1,000 feet, 239 from 1,000 feet to 2,000 feet, 102

comes from the Cunnamulla bore, which yields 4,500,000 gallons every 24 hours. In South Australia the maximum depth is 4,850 feet, and the minimum 233 feet.

Now these bores are expensive works, and one cannot always rely upon striking useful supplies, indeed hundreds of thousands of pounds have been spent on bores that ended in failure. The contract price for these bores ranges from about \$5.00 to \$50 per foot, so that it can readily be seen that to provide water on the great areas mentioned a large amount of capital is necessary. It

is very important to note that the bulk of this great national work has been done by private owners. In Queensland 222 bores were put down by the government, 46 by local governing authorities and 1,443 by private owners. As showing what money has been lost in the endeavor to supply waterless land with the precious fluid. Out of the 1,711 bores in Queensland, 785 struck flows that came to the surface, 329 struck flows that rose certain distances



An Artesian Well At Work.

from 2,000 feet to 3,000 feet, 32 over 3,000 feet, and 5 over 4,000 feet. These figures therefore show that the majority of bores are from 1,000 feet to 3,000 feet. The deepest bore in the state is at Boronga where a depth of 4,338 feet was reached, and a flow of 1,062,133 gallons per diem came to the surface. The Dolgelly bore struck a flow of 622,185 gallons at 4,086 feet, and the Boobora bore a flow of 1,133,300 gallons per day at a depth of 3,225 feet. Queensland, however, is the great boring state. The deepest bore is down 5,045 feet, but it yields only 70,000 gallons daily, while the biggest flow

in the casing, but had to be pumped to the surface and 597 were in progress, or abandoned, or uncertain.

A considerable amount of loss and anxiety has been caused through the failure of some bores which started off with a good supply, and in many minds there arose the query as to whether the artesian supply was becoming depleted. Careful investigations have been made and though there are numerous instances of bores having greatly diminished in flow, or of failing altogether, there are other instances of where bores have maintained an even flow without any varia-

tion. The water is allowed to come to the surface without any check, and it is carried through many miles of channels to where it is required for stock purposes. There must therefore, be a huge waste from seepage and evaporation, and the remedy that at once occurs to the lay mind is to control the supplies from the bores and shut them off when not required. This theory has proved most disastrous in practice because it has been found that if the flow is checked it is confined with great pressure in the bore casing, and the result is that the casing corrodes and is destroyed. It has also been found that the water being unable to find an exit through the bore rises outside the casing and becomes dissipated in the various strata and is completely lost long before it reaches the surface.

A situation has been created in Queensland by the government issuing regulations regarding the artesian water supply. These regulations are supposed to compel private owners of bores to regulate the flow so as to avoid waste and they also stipulate certain matters regarding the construction of the bores. The result of these regulations, which have been two years in operation, has been very much against the interests of the stockraising industry. The regulations regarding the limitation of flow have been disregarded for the reasons given above, and those dealing with the construction of bores have so augmented the cost that boring operations have greatly fallen off. In fact they have been almost suspended. This means that large areas being unwatered are practically unstocked, and the aggregate loss to the country is enormous. The situation reached a head a few weeks ago when a deputation representing the grazers of Queensland waited upon the government and asked for the repeal of the act imposing such injurious regulations. The deputation presented such a strong case that it is more than probable that the objectionable restrictions to the big enterprising national work of developing otherwise useless country will be removed.

A very important fact in connection with the artesian bores of Australia is that except in one or two instances the water is entirely unsuitable for irrigation purposes. It is of immense value for watering stock, but it is actually injurious to plant life, being so heavily charged with alkali and other mineral matter. The analysis of the various bores differ considerably, but in the main if the water is allowed to flow over irrigative areas, it forms a silt on the surface which in the course of time destroys plant life.

An official in New South Wales a few years ago propounded the theory for converting the injurious salts of bore water into a valuable fertilizer. The objectionable compound in the water is carbonate of soda, which when brought in contact with the soil forms a substance known as silicate of soda which forms a hard covering to the surface of the soil rendering it impervious to air. The theory was to add nitric acid to neutralize the effects of the carbonate of soda by converting it into nitrate of soda, a most valuable fertilizer.

It was proposed to obtain the nitric acid from the atmosphere by means of electricity which was to be generated by the energy supplied by the pressure of water coming up out of the bore. This theory is no doubt chemically sound, but nothing more has been heard of it. Indeed it was never explained what the effect would be if more nitrate of soda were generated than would be required.

In regard to bore pressure, however, I may here state that on several sheep stations in Queensland the shearing machinery is driven by Pelton wheels worked with the pressure from artesian bores.

"WHO GETS THE \$4.64?"

To the editor of the Public Ledger: Sir—That awful Schedule K! Who gets the \$4.64? In December I saw in a large department store a Scotch steamer rug, \$20. On January 2 the rug is still there at the same price, although the duty is reduced \$4.64.

EDWARD A. GREENE.
Philadelphia, January 2, 1914.

Important

The dues for the year 1914 of all members of the National Wool Growers Association, amounting to \$5.00 each are now due. We respectfully urge all members to forward this to the association without delay

**National
Wool Growers
Association**

SALT LAKE CITY, UTAH

All About the Wool Fiber

Address Before the Boston Wool Trade Association, by William Price, Wool Buyer for Arlington Mills.

SHEEP are of great antiquity. We read that Jacob took the "Brown, Spotted and Speckled" sheep for his pay as shepherd for Laban and it is recorded he became very rich (somehow in these days I think the name Jacob connected with Brown sounds familiar) and the fact is that this latter day Jacob also became rich. The good book tells us that in the day of Judgment the sheep and the goats will be separated, so that we may be reasonably certain that there will be sheep and their product to consider until the end of June. It would be interesting to trace the history of sheep breeds did the time permit and I had the ability, but to show you the vast range of grades in the wool produced: Take from the Calmuc Sheep of Russia, probably the coarsest and roughest produced, and then recall what I used to handle when I first entered the business, the finest Saxony wool. These were raised in eastern Ohio and West Virginia, and the washed fleeces only weighed two or three pounds. They were so fine they not only made XX grade, but XXX and a selection from that was known as Picklock and a finer selection Picnic.

It will be interesting I think to you if you put a fibre of wool under the microscope (mark me, I say MICROSCOPE, not a telescope, which they say some buyers use when buying wool in the west, and then they wonder why it looks so poor when they get it home.) Assuming you use the microscope, what do you see? A stem closed at the weather end of the fibre and hollow like a pipe stem, with serratures that look like fish scales closely adhering to the sides of the stem. Keep this description in mind as I shall refer to it later.

You would not think that feathers and wool are at all alike, but it is a fact, that an embryo feather has the stem and serratures, but, of course, the similarity soon ends and we do not hear the comparison again until when you try to sell me wool, you say it is

"As light as feathers." The composition of the wool fibre is

42-50 per cent pure wool fibre
20-22 per cent yolk or suint
7-10 per cent fatty matter
10-18 per cent moisture

so when you look at wool again you will now know more than you would discover with the naked eye.

Wool is very susceptible to its environment; a change of feed, too much or too little, location, heat, cold, drought or disease is soon apparent in the wool. If you take the finest woolled sheep from Sydney and put it in Adelaide you would not recognize the wool at the next shearing, the change would be so great in quality. You know the wool fibre originates at the bulbous roots which are between the outer and inner—our true skin—and is forced up through the pores. There are many books on breeds and manufactures of wools, some of which I would advise you to read.

"Bowmen's Structure of Wool, etc."

"Bumley's The History of Wool."

and both of these are in the Boston public library. They are not new publications. Among the later publications are:

"Priestman's Wool Combing,"

"Priestman's Wool Spinning,"

"McLarren's Woolen and Worsted Spinning."

Probably the most complete and exhaustive book ever published was that by Prof. McMurtrie published in the 80's and referred to by Prof. Baker in his lecture. The very best book I ever saw is one lately published (in 1912) a joint production of two professors, Messrs. Barker and Priestly in the Bradford, England, Textile School.

Wool is a most interesting subject and there is lots to learn about it, but when you have a practical knowledge of it, you will find you have something "that time cannot wither nor custom stale." I think the best place for a young man to get a practical knowledge is in a sorting room or with a

grader in the wool lofts, but many have made a success starting as shipper or in the office, but wherever you start, you have got to work like blazes, keep your eyes, ears and mind open, if you hope for success. There is no royal road.

The most successful wool experts I have known seem to have what I would call "The wool sense" and they who have it come on more rapidly, it seems to come intuitively; but have hope, it can be acquired. It is better for young men to get to know wool intimately, but I have seen brilliant salemen who could not tell whether the wool would shrink 63 per cent or 68 per cent (as buyers they would not be brilliant.) Now as to shrinkage, some foreigners assert they can judge shrinkage within a fraction of 1 per cent, and then I have heard of the same people not coming within 6 per cent of the shrink. After a long experience, I assert it is impossible to exactly judge on every particular lot; how can you when you consider that if wool is weighed on a dry or wet day, it can easily make 1 per cent difference; but in buying a line, with judgment, you should on the average approximate very closely. Just here it occurs to me to tell you of conditioning. This means, getting at normal weight, and normal weight means the consideration of moisture that wool takes up, kept in an average temperature. Samples from tops, for instance, are put in a receptacle. This is connected with a very sensitive scale and placed in an oven at great heat, and when the scale does not vary, we then know there is not a particle of moisture left in the sample—it is bone dry. The weight difference is noted between what it weighed when it went into the oven and its bone-dry weight and from that the normal weight is ascertained. They add generally in this country 15 per cent to bone-dry to bring it to normal, and properly tested, it will not shrink to bone-dry from normal but 13 per cent, and that

is what is meant when we say 15 per cent regain or 13 per cent shrink. Now the basis of conditioning varies in different countries. England has one basis, France another, and as you are likely to do business in both countries, I would suggest that this association collect these different tables for the benefit of—particularly—the younger members. Before conditioning was general here, a question of conditioning of yarns arose in a law suit, the buyer claiming there was much moisture. The lawyer cited the case of Gideon (Judges, chapter 6.) who wished to be assured of God, that God would be with him in battle, and as a sign, Gideon would put a fleece of wool on the ground outside his tent at night, and if the wool was wet in the A. M. and the grass dry, he would know God was with him, and it was so. The next night he asked of God further assurance; this time the grass was to be wet and the wool dry, and it was so. "Now," said the lawyer, "if it takes a miracle of God to keep water out of wool, how could you expect a mortal manufacturer to do it?" I will digress with another story just now—about color in goods. A buyer complained to a manufacturer that the goods faded. The manufacturer looked out of his window at the grass and said: "A few weeks ago that grass was green; look at it now; it is brown. Now, if God Almighty cannot make a fast color, how can you expect us to do so?"

The wool business has had noted people in it, besides the ancient and modern Jacobs. Wm. Shakespeare was in the wool business, and he may have had his wool experience in mind when he later wrote: "Oft expectation fails, and most oft, there where most it promises." As a modern instance, there is Sir Wm. P. Raynor, who has lately visited us from Huddersfield, England.

A young wool man should learn as soon as possible what different kinds of wool are best adapted for. There are the woolen wools used by Felters, Knitting manufacturers and woolen mills in general. Each branch requires wools of a different style, and the

scales I told you of are very necessary in many woolen processes, for the more crisscross the fibres are in woolen yarns, the better, and the scales help to felt and bind them together. But in worsted manufacture the conditions are entirely different. Every process is for the purpose of paralleling the fibres and the carding and combing remove a lot of the scales and leave the fibres almost as smooth as a pipe stem. To stand this process the wool must be fairly long and strong, particularly for English combs. On French combs much shorter wools can be used. French combs are best adapted for fine wools, but crossbreds are sometimes used.

There is a subject which is now being introduced in the trade which you should know about and that is where they propose buying on guaranteed scoured basis and have the scoured result considered as the yield in top and noil. On fine and fine medium territory this means from 1 per cent to 2 per cent shrink against the seller, as the card and burr waste is hardly offset by the conditioning of the top and noil on dry combed top. You know you are talking of the grades of wool in numbers, 40s, 44s, 50s and the rest. This originally meant that a 40s would spin into a 40s yarn and numbers in yarn are reckoned from No. 1 which contains 560 yards of yarn to the pound, and you can get at the yards per pound in any other count by multiplying 560 with the count required. In England they used to spin wool to its full value, but today in the rush and demand for cheapness and large product they seldom do. It is almost impossible to compare the English counts of wool with our grades of $\frac{3}{4}$, $\frac{3}{8}$ and $\frac{1}{2}$. The nature of our native wools is different from any produced elsewhere and are for many purposes worth from 2 to 4 cents a top pound more than an approximate foreign wool. These remarks apply to crossbreds only from 50s and below.

The English textile schools were established about thirty years ago and advanced in method and teaching very much since they began. Our own textile schools are modeled very much

after the English lines, but where they have made most progress in technical lines is in France and Germany, particularly Germany. They take infinite pains to get everything in wool on a scientific basis. Grades of wool are classified very minutely and every phase is given their deepest and best thought. I would commend their example for us to emulate. I will never forget the first time I visited an Antwerp wool merchant. He could tell me right off costs of wool landed in Boston in cents a pound, in England in pence per pound, in Germany in marks and in France francs per kilo. He was a world-wide merchant.

Geography enters into the wool business more, possibly, than any other business. Our own country and Canada you are fairly familiar with. In South America there are the Argentine wools, and just across the bay from Buenos Ayres there is Montevideo and at the extreme south end of South America, the Punta Arenas and Pas-to Fuertes are obtained. Then on the west coast, the Peruvian and Chilian wools, also the Alpaca and the Vicuna, the latter the most expensive fibre known to our trade, sometimes bringing \$2.50 a pound, but the supply is very limited as they have to kill the wild goat to get the Vicuna; but they can help out with cashmere from Asia and sometimes kid mohair from Turkey. It is a fact that the cats, donkeys, rabbits and mohair goats of Turkey have that soft silky feel to their fibre and as soon as you take them from that environment they lose that feel. They raise Merino wool in Russia something like our fine Michigan, but hardly as good. Of course, we all know Australia is the biggest producer of any country, and as they pay much attention to breeding, they raise the best wool in the world and the largest quantity. I shudder to think of what we would do for a wool supply if Australia should have a drought some time. South Africa is developing rapidly now, and this, to my mind, is our land of promise for our future wool supply. I will not leave you in South Africa, but

bring you back to Boston, one of the largest wool markets in the world, and ask you to consider some striking phases in manufacturing processes. I have a sample of yarn here which you see has a great many ends sticking out. This is made from a low South American crossbred, and in spinning this, this bobbin on a spindle on the spinning frame revolves at the rate of say 6,000 revolutions a minute, a great deal faster than your eye can follow. It looks, as you see the yarn spin around, like a balloon and yet there is only one thread, and in the ballooning you seem to see hundreds; if a tin guard was not inserted between each bobbin the threads would fly into each other. When a perfectly smooth yarn is required it is put through a gas flame, which process burns off all these protruding ends. This process is called genapping or gasing. Goods for a smooth effect are treated by gas flame, also the goods are run over a heated copper plate. This impresses visitors as very wonderful. Of course, it is going some when it passes over the plate, very much faster than the proverbial messenger boy. Look at this yarn—probably a 20s, 11,200 yards or 6 1-3 miles to the pound, and then at this made by the Griswold W. Co. of Philadelphia for exhibition there in 1876, patriotically made out of a very careful selection of Ohio fine delaine. This is a 200s or in other words 112,000 yards or 63½ miles to the pound. Here is another fact that may interest you. Wool stretches in combing from one-fourth to one-third its length according to its grade and breed. It is interesting to recall how they used to take up combing wool. They tried it in about a dozen places in the fleece for strength, stretched it over their forefinger to be sure it was long enough and rejected it if it did not come right up to the standard. Their rejections were often sold at a discount of 10 cents a pound, and were used by woolen mills after they had broken up the staple. But one day the late Mr. Chas. Fletcher conceived the idea of taking these rejections and making yarn of them, that proved more valuable than that made out of the longer

and stronger wools. Just at that time there was a big demand for these yarns, and I am told he made a profit of 25 cents a pound on yarns then. Since that time the combers have introduced improved English combs, and also French combs until now almost anything can be used, as Prof. Barker told you, but even now there is a limit beyond which it is unprofitable for a comb to go. The book tells you of the Arlington mills cleansing process which I will briefly describe now. The wool is put into tanks or kiers, about 2,500 pounds at a time. Naptha is forced through until a gage at the side of the tank shows clear naptha. Then we know the grease is all extracted. The greasy naptha is then run into tanks where the grease is separated and recovered, the naptha refined and used over again; then the wool is taken to the washer and water is forced through the wool, not the wool through the water. It is cleaned without soap and here curiously the scales on the fibre show another use, for the natural potash in the wool is held under the scale. This saponifies and cleans the wool without soap and from the dirty water we recover the potash; so as they say at Chicago, they save all of the hog but the squeal. I have a sample of the wool grease (degras) which can be examined later.

Why is it you seldom sell a comb scoured wool? Because wool has to be moist when it is put on to the cards and if scoured wool was bought, it would necessitate running it through the water again and it would be likely to rope the wool, entailing more card waste and noils. A comb's aim is to keep the fibres in as natural position as possible and avoid any extra handling and it is exactly the reverse in woolens.

Why is it combers seldom buy year's growth Texas wool? For two reasons. Felters and face goods makers will pay more for its peculiar felting or fulling properties and for this reason combers would avoid it, for it contains just what they do not want.

As the books I have given you contain most other points you will care

to know about wool I will refer you to them.

Relled wool.—There is quite a contrast between the way they used to pull wool in England when they dipped the whole pelt in a lime vat, then the wools were full of lime and pulled wools were undesirable. Today when you consider the product of Armour Armour, Swift and others, there is hardly a trace of lime, the grades and color are made very even and without exception they are the best pulled wools in the world and when I make this statement I have in mind the New Zealand pulls, the English pullers and Mazamet, the largest pulled wool center in the world.

HEAVY EWES.

We shipped a bunch of 500 Cotswold ewes right off the range in South Omaha last fall and they weighed 130 pounds and sold at \$4.40 per hundred. We cut four head out of this lot that weighed 233 pounds and sold at \$4.40 bringing \$10.25 each. These were straight Cotswold ewes. Our lambs 4,500 weighed 81 pounds and sold at 7 cents. They were out of ¾-blood Cotswold ewes and Cotswold rams. We are running pure bred Cotswold ewes on the range without much trouble. They may be a little harder to herd but we get more for the wool and mutton.

EDWARD BLANEY, Wyoming.

NEW SHEEP BULLETIN.

The United States Department of Agriculture has recently published Bulletin number 20, "The Management Of Sheep on the Farm." This is a very useful publication to the farmer who is keeping sheep or who anticipates entering the business. The publication contains a general survey of the farm sheep industry, discussing practically every phase of the subject in a most thorough manner. We suggest that farmer sheepmen write for this publication to the department.

We cannot work without funds.

WOOL OUTLOOK GOOD

The Wool Warehouse has recently sent the following letter to its stockholders:

There is much of encouragement for the grower in recent developments of not only the wool markets but the woolen and worsted trade. Wool markets of this country are in a better condition than they have been for several months. Many handling wool are convinced that any change that is likely to arise will be for the better. The opinion prevails that wool has struck its lowest level for the time being, at least.

The first series of the London sales have closed. The sales commenced around the December level and prices were actively supported throughout. The better classes of wool improved and closed from 5 to 7½ per cent higher, and the finest merinos were occasionally 10 per cent dearer. Ordinary clips were unchanged.

Stocks of wool in this country are very greatly reduced and although manufacturers report business as being far from satisfactory, yet it is probable that supplies of raw material now in hand will all be required before the new clip is available. If larger than normal demands are made by American users in foreign markets, it would be surprising if these can be obtained without forcing prices higher.

It is announced that the American Woolen company has sent a representative to England for the purpose of investigating the possibility of developing foreign markets for their woolens and worsteds. The "Textile Manufacturers Journal" states the following:

"President Wood of the American Woolen Company, reaffirmed his determination to make every possible effort to meet foreign competition under the present low tariff and to keep his mills and operatives employed. He believes that the extremely low prices named on both light-weights and heavy-weights and the encouraging amount of business already booked on

new lines afford ample confirmation of this policy.

"The above announcement is of special significance coming as it does so soon after the statement that Forstmann & Huffman have been selling lines of women's wear in Paris. It also acquires further significance in view of the reports concerning the lack of competition by the foreigner in this market on lines of men's wear."

PROSPECTIVE WOOL PRICES

Commenting of the wool market the Daily Trade Record of New York quotes an Eastern wool dealer as follows:

"More than six months ago I reported the difference between domestic and foreign wools, and sometimes we feel flattered when our judgment is sustained. I said that foreign wools had to decline or domestic wools had to go up. Foreign wools declined and rose in the meantime; domestic wools declined for no reason, except uncertainty. Domestic wools went higher and are still climbing. It I told anyone three months ago domestic A supers for French combing purposes would sell on a clean basis of 50 cents a pound! But it is an actual fact that today A supers which can be combed on the French system sold for 50 cents per pound on the clean basis, or 34 cents in grease, with none in sight. The seller who told me of this said: If only I could reach a few hundred thousand pounds.

"This is the wool market on domestic wools today. If we only could reach domestic wools we could sell them.

"In October and November pretty near everybody in Bradford was in Boston to sell wool. A half dozen houses asked: 'Will you represent us?' we told them we could not sell foreign wools in place of domestic; as I have urged before, domestic wools are matchless. We can have quite finer wools, and we can have coarser wools, but at large our domestic wools cannot be replaced.

Some Manufacturers Will Find Difficulty When They Come to Work Certain Foreign Wools.

"All domestic wools continue in a very strong position and prices advancing. Any kind of wool in the world's market is, in fact, in a very strong position. A compromise in prices will come and then foreign wools also. They are already commonly made but some of our manufacturers will find difficulties when they commence to work foreign clothing wools especially. It is different when they have South American or Australian fleece wools; those are the only wools which come into consideration to speak of. A few English wools come into consideration but very little, as an English wool all through is too much on the straight hair order."

INCREASE OF WOOL IN SOUTH AFRICA.

The following is from the Wool Record of January 15th:

An increase in exports from 121,668,034 pounds in 1910, to 161,974,684 pounds in 1912, or 33 per cent in two years, is gratifying. And it should be noted that this is due not only to the increase in the number of woolled sheep, but also to the large quantity of wool produced per sheep. In 1907 this quantity was about five pounds per woolled sheep; between that year and 1912, nearly another pound (.92) of wool per sheep had been added by improvement of the flocks. Added to this is the fact that, as would be expected from the marked intelligent attention which is being bestowed upon this industry, there is an increase in the number of woolled sheep of 25 per cent in eighteen months (from 21,842,215 since the last census-taking, to 27,331,167 at the end of 1912), while the number of non-woolled sheep decreased from 8,814,444 to 8,557,754.

The rabbit that we hear so much of in Australia is the English hare and not our common jack-rabbit. Millions of dollars worth of these hares are annually exported to Europe for food purposes.

January at the Sheep Markets

(By J. E. POOLE)

CHICAGO and the four principal Missouri river markets received approximately 1,100,000 live muttons during January. Much of the time it was a case of too many sheep where lambs were concerned. Chicago's quota was 485,000 head, a gain of 35,000 over January of last year. Omaha made a new January record with 226,000, or 20,000 more than a year ago. Ten years ago the January run at Omaha was only 115,000, and twenty years ago it was credited with but 24,000 during that month. Kansas City receiving 160,530 in January, a decrease of 3,353, and St. Louis received 63,000, a loss of 12,000 compared with 1913.

Chicago's January supply was the second largest for that month, having been exceeded two years ago. Broad eastern demand was a trade feature, purchasing on that account being approximately 100,000 head, creating a new January record and absorbing one-fifth of the total receipts. This was a remarkable showing in view of the fact that much of the month eastern prices were relatively, if not actually lower, than at western markets, but easily explained by continuous hunger east of Chicago, for feeder grades.

The bulk of the hay fed delegation reaching Chicago from Montana, went to Michigan and Ohio feeders, and at all times it was easier to sell feeders than fat ones. Buffalo was lower than Chicago most of the time and the previous impression that mutton consumption in the middle west is expanding was confirmed.

Prediction of continued spread contraction was verified. The January crop ran heavily to lambs and matured muttons gave good account of them-

selves. That prices of the two classes will work closer together as the season works along is probable. Rarely does a day's supply carry an excess of sheep, and heavy mutton scarcity is confidently predicted. The result of this scarcity of matured stuff was a one dollar narrower spread between sheep and lambs than during January, 1913. That gap this year was only \$2.25 per hundred against \$3.35 in 1913.

Supply came largely from the cornbelt states and represented the host of thin stock that crossed the Missouri river last fall. Iowa was the heavy

December's average, while a \$7.75 average on lambs was but a shade above the previous month. The sheep average was fifteen cents higher than that of January, 1913, while lambs averaged eighty-five cents lower than during that month, when the record was made at \$8.85.

Market conditions were choppy all through the month and the close was slumpy, fat lambs being 20 to 25 cents lower, light yearlings, light ewes, and most aged sheep 10 to 15 cents lower, while heavy ewes finished 25 cents higher, and heavy yearlings practically steady.

Condition was poor and finished stock the exception. All through the month temperatures were unseasonably high preventing the display of mutton carcasses by retailers, a condition that always contracts consumption. Old time traders assert that never before have they witnessed a January run in such poor condition, but this is not surprising, feeders having no incentive to put on finish. Feed bills was high and killers were adamant in their refusal to pay a substantial

or adequate premium. Growers concluded that the packers wanted half fat stock and it was good policy to let them have it, consequently every packer favored premature marketing. Weight naturally was not subjected to the same severe discrimination as last year when feed was lower, but the call was for lambs weighing eighty pounds or less and sixty-five to seventy-five pound stuff in merely half fat condition enjoyed ill disguised popularity.

Every bulge of prices furnished feeders with incentive to order cars,



Champion Shropshire Wether—Portland Stock Show.

contributor. A few came from Idaho, but the movement out of Colorado feed lots did not get well under way until the latter part of the month and Omaha stopped the bulk of it. Wisconsin disgorged considerable fed stuff and more came out of northern Illinois than the section was credited with. The whole cornbelt went to sheep and lambs last fall because stock cattle were scarce and hard to buy.

As near as an average price can be figured that of January on sheep was \$5.45. This is fifty cents higher than

the supply was poorly distributed. One Monday developed a run of 50,000 at Chicago, a new one day record for the month, and the resultant penalization damaged feeders pockets. So many western sheep and lambs were handled by new operators this year that the commission interests was wholly unable to control the movement. Feeders were so high last fall that many of the old time operators refused to go the pace. Others stepped into the breach however, and as weather conditions were favorable, even the amateurs made money. A big feature of the purchasing of thin western stock by Iowa was that the movement was distributed all over the state, noted feeding centers of former seasons putting in few. Iowa has cleaned up some nice money handling sheep and lambs this season, and will be in the 1914 feeder market early, and with both feet, probably going to the breeding ground to make contracts. Cattle are going to be high right along and once a farmer has fattened a band of sheep or lambs that give results, he has acquired the habit. Wherever sheep cleans up a cornfield, added yields in succeeding years attest the merit of this method of harvesting.

Colorado which contained formerly 800,000 lambs, mainly in the northern part of the state began loading about the middle of January, but Chicago received only about thirty cars from that source during the month. From now on, however, the Colorado movement will probably be free. Montana has been shipping hay fed sheep freely, seventy-five per cent of the run from that quarter being really in feeder condition. Idaho and Utah have also contributed a few, but minus the bovine army that crossed the Missouri river last fall, and was tucked snugly away in corn belt feed lots and corn fields, mutton of all kinds would have been a luxury. The big feeding stations around Chicago have not had their space taxed for the reason that holders could see no profit in running up large board bills, especially at current cost of feed. Operators have been obsessed with the idea that stock when marketed was well disposed of.

Montana feeders dodged expense at these big boarding houses, staying only a few days to rest up and get orders to load for the market. The result was a generous showing of feeders to which Michigan operators went greedily. Thousands of Montana hay fed lambs finding that outlet at \$7.00 to \$7.30. Such thin stock as went to the country at \$6.25 to \$6.75 being decidedly ornery. Several strings of Montana feeding wethers sold during the month at \$5.00 to \$5.40 with feeding ewes at \$3.90 to \$4.25.

January's lamb top was \$8.40 on fed westerns, \$8.35 on natives and \$8.15 on Colorados, nothing choice coming from the latter source. Bulk of the lambs sold on killing account at \$7.35 to \$8.00 with feeders largely at \$6.75 to \$7.25. Colorado and Mexican yearlings sold up to \$7.50 and fed

**IF YOU have Yearlings or
Bred Ewes For Sale,
\$10.00 will pay for their
advertisement in this
paper for 3 months. This
will put you in touch with
the buyers direct.**

western yearlings to \$7.35, but \$6.25 to \$7.00 took the bulk of the yearlings. Few heavy weights passing \$6.75. Aged wethers sold up to \$6.30. A number of loads reached \$6.25, while \$5.65 to \$6.10 took the bulk with some Montana hay feds on killing account at \$5.50 to \$5.75. Fat ewes sold largely at \$4.85 to \$5.60, several bands of Montana ewes of common to plain quality going on killing account at \$4.35 to \$4.75, with a few up to \$5.50. Prime heavy native ewes reached \$5.80 and quite a few good natives and fed westerns selling at \$5.60 to \$5.75.

Weekly average prices follow:

Week Ending	Sheep	Lambs
Jan. 3	\$5.35	\$7.90
Jan. 10	5.50	7.95

Jan. 17	5.40	7.70
Jan. 24	5.50	7.65
Jan. 31	5.50	7.65

Monthly top prices with comparisons follow:

	Sheep	Lambs
January, 1914	\$6.30	\$8.40
December, 1913	6.25	8.40
January, 1913	6.50	9.50
January, 1912	5.10	7.40
January, 1911	4.75	6.65
January, 1910	6.60	9.10
January, 1909	5.85	8.10
January, 1908	5.75	7.40
January, 1907	6.00	7.90

Monthly average prices with comparisons follow:

	Sheep	Lambs
January, 1914	\$5.45	\$7.70
December, 1913	4.95	7.65
January, 1913	5.30	8.55
January, 1912	4.25	6.50
January, 1911	4.10	6.20
January, 1910	5.55	8.30
January, 1909	4.90	7.35
January, 1908	4.80	6.80

BOSTON WOOL MARKET.

(Commercial Bulletin.)

Ohio and Pennsylvania Fleeces.

Delaine Washed	27 @ 27 1/2
XX	26 @ 26 1/2
1/2 blood combing	24 @ 25
3/4 blood combing	24 @ 24 1/2
1/2 blood combing	22 @ 23
1/2 %, 1/4 clothing	21 @ 22
Delaine unwashed	22 1/2 @ 23 1/2
Fine unwashed	21 1/2 @ 22
Common and braid	20 @ 21

Wisconsin and Missouri.

3/4 blood	22 1/2 @ —
1/4 blood	22 @ 22 1/2
Braid	20 @ 21 1/2
Black, burry, seedy cotts	18 @ 19
Georgia	20 @ 21

Kentucky and Similar.

1/2 blood unwashed	23 @ 23 1/2
3/4 blood unwashed	23 @ 24
1/4 blood unwashed	— @ 23 1/2
Common and braid	21 @ —

SCOURED BASIS.

Texas.

Fine 12 months	51 @ 53
Fine 6 to 8 months	45 @ 46
Fine Fall	41 @ 43

California.

Northern	46 @ 48
Middle County	43 @ 45
Southern	40 @ 42
Fall free	42 @ 43
Fall defective	35 @ 38

Oregon.

Eastern No. 1 staple	53 @ 55
Eastern clothing	48 @ 50
Valley No. 1	43 @ 45
Valley No. 2	41 @ 42
Valley No. 3	35 @ 38

Territory.

Fine Staple	55 @ 57
Fine medium staple	51 @ 53
Fine clothing	51 @ 53
Fine medium clothing	48 @ 50
1/4 blood combing	52 @ 53
3/4 blood combing	45 @ 47
1/4 blood combing	40 @ 41

1914.
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3 @55
18 @50
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15 @38
5 @57
1 @53
1 @53
18 @50
2 @53
5 @47
10 @41

English Wool Trade

"EVIDENCE OF MORE BUSINESS WITH THE UNITED STATES". (From Our Special Correspondent)

Bradford, England, Jan. 14, 1914.
ONCE more we have crossed the hold of a new year, and 1914 is largely engaging the attention of the members of the wool and textile trades throughout Europe and America. A surprising interest is displayed in the future course of prices, and the more one thinks of the big volume of raw material which is moving, the more remarkable is the fact that values are resting firm. When one remembers that in the short space of a dozen years the output of Australia alone has practically doubled, and that prices also have increased 100 per cent, the immensity of the wool and textile industries is clearly seen. Yet no person ventures to pronounce finality or to say that the utmost expansion has been reached. The opposite is the case, for the more one thinks of what has been, and what is likely to be done, the more we see what lies ahead of the trade waiting to be accomplished.

These thoughts are suggested not only because "hope springs eternal in the human breast," but because that great market, the United States, has again been opened to the wools of the world, and the wool duties abolished. It is too early yet to forecast the future of the American sheep and wool industry, but it will be a thousand pities if sheep farming deteriorates or one single hoof less is kept by the pastoralists of the United States. We see no reason whatever for retrenchment,

the broader foundation of their English and New Zealand competitors, we believe they will be able to make wool and mutton growing as profitable as sheep farmers have done in the two countries named.

Measure of Trade Doing.

Since we last reviewed the course of the market, two or three notable things have happened which have had an important bearing upon the course of the raw material. The opportunity has been furnished to the trade of taking

ford than for the previous two months. Evidently the majority had come to the conclusion that there was nothing to be lost by operating, consequently a fairly big volume of business was done, many people being of the opinion that prices had touched the bottom. It is not clear today that the prime move in causing the buying, was any but that already alluded to. Some previous operations had been accomplished on a basis of 2s 2 1/2d for average 64's tops, and those who had the courage to buy at that figure are today to be congratulated. We said at the time that such prices seemed to us to be the lowest for the time being, and we came to that conclusion from the way the raw material sold last sales in London, and also the finish of the sales in Australia. When we find the raw material absorbed readily without prices giving way, it is generally a sure sign that the time is ripe for operating, and the buy-



Romney Ram Sold by Hickman & Scruby of England for \$1625.00.

ers who purchased at 2s 2 1/2d for decent 64's tops are to be congratulated rather than the sellers. All along the trade has been feeling its way towards a lower level of prices, and we have contended that directly values came down to a more reasonable basis, it would pave the way for considerable trade.

Crossbreds Still Somewhat Indifferent

Although a decent turnover has been accomplished in crossbreds, the measure of the trade done is not to be

compared to that effected in Merinos. Somehow crossbreds do not appeal with the same freedom and vigour to users as Merinos, the chief cause being the slack-set-up condition of the export yarn trade. We regret this very much for the simple reason that crossbreds are still a prime article of commerce, but they are not moving among home trade spinners and manufacturers as one would like to see. All through the year the missing link has been the poor demand on export account for tops and yarns, the board of trade returns giving unmistakable signs of the lessened call on export account. This is only a legacy of the late ruinous Balkan war, and notwithstanding all the millions spent and the thousands of lives sacrificed, the Balkan nations are not by any means at peace one with the other. It seems a pity that when a nation like the Turks has need to repair its breaches and to resuscitate trade, it should put some millions of money into armaments, for the best guarantee of peace and prosperity is a good international trade. However, we have to take things as they are, our only regret being that the trade in textiles with the near East is not better. We fail to see how it can be, and the sooner those in high authority recognize the fundamental principles of national progress, the better it will be for all alike. It is somewhat difficult to say which qualities have fared the best during the past month, a fair business being done in practically all counts ranging from 46's to 56's. The recent mild winter has undoubtedly effected the hosiery trade and prevented that demand for heavy hosiery fabrics which would have obtained if cold weather had prevailed. The majority of crossbred users have been seeking a lower level of prices, but the way new clip wools have sold in New Zealand and Buenos Ayres has shown clearly that there is little hope of getting down much, if any lower.

Conditions on the Continent

A great deal has been made in the Colonial press of the active buying by French and German buyers at Aus-

tralian selling centers. We do not in the least undervalue the support which has been forthcoming, and which certainly has prevented prices from declining further. We hope that the wools bought particularly on French account will prove to be a good investment, but all the same there is room for a considerable improvement in business. At Roubaix and Tourcoing some firms are busy, but others are finding it difficult to keep their machinery running. During the past week we have had the opportunity of reading two important letters, both from Tourcoing, and both from important wool houses. One is couched in very pessimistic language, and there breathes through the epistle feelings which are anything but encouraging. They think that the future of wool prices depends entirely upon the state of the textile industry of the West Riding, and if there is no chance for the better that a fall is inevitable. The other letter breathes a totally different spirit. The writer feels satisfied that the new year has brought better conditions; he speaks of trade being fairly good with the majority of firms in the north of France, some amelioration in Bradford, and also a prospective important trade in the United States. So much for views regarding the future of wool prices when viewed through French spectacles. From Germany, we have reports that are not altogether what they might be. Saxony spinners are not at all in a vigorous way, but Russian users appear to be fairly well employed and capable of consuming some fair weights of wool. Putting all things together, we think that the state of trade in general just about warrants today's prices but no more. No doubt the present state of the finances of all countries is acting as a brake upon wool markets everywhere, and even the prospect of cheaper money is not today inducing anyone to speculate. That term has during the past six months been unknown, for none will venture into the realm of buying largely on forward account. Futures have undergone a somewhat sea-saw movement during the past fortnight, though

the rise outstrips the decline of the last day or two.

The Future of Crossbreds.

We are writing this on the eve of the opening of the first series of wool sales in London. Very few New Zealand crossbreds are available, the quantity being less than we have known for the past fifteen years. In fact, one would have to go back a very long time to find only 12,500 bales being available. On the other hand there will be a decent offering of Australian new clip Merinos, and some very good wools will be submitted. The future of crossbreds appears to us to be a very opportune subject, and as far as one can see there is not much likelihood of prices losing ground. Some think that at the March sales there will be a chance of easier rates when fairly large quantities will be available, but that remains to be seen. During the next two months the trade will have the opportunity of getting rid of all surplus stocks of both wool and yarns, consequently we are not today so very certain that March will provide much easier prices. Everything we say will depend upon how trade develops and particularly on the attitude of America. That market seems to be the thing to watch at the present juncture. Now that the lower duties obtain we shall soon be able to see what is likely to take place, and if the Bradford exports to the United States for December are anything to go by, it looks as if this district is going to do considerable trade in wool, tops, yarns and pieces during next few years. We are looking for a firm market both in Merinos and crossbreds.

Since writing the above the opening of the January series of London sales began yesterday, and prices have gone very much as we expected. As a matter of fact, Merinos show no change, and none was justified. The best classes sold very firmly on a full parity with December closing prices, and the same can be said for medium descriptions of both grease and scoured, but the heavy wasty wools barely maintained December parity.

Crossbreds are available in very small quantities, and only one "new clip" from New Zealand was submitted, and to this America gave a fair amount of support, securing some good deep Lincoln crossbreds say from 36's to 44's quality at 22 cents and 23 cents. This is one of the best marks that comes from the Dominion, and considering the character of the wools, the prices bid are on the whole satisfactory. Some were a little disappointed that the competition was not more keen on the part of the continent, but how could it be expected in face of the heavy quantities of wool which are weekly arriving at French and German manufacturing centers, particularly the former. We think that wool values are just about where they are going to stand unless America begins to buy in a very active and demonstrative way, which we cannot as yet see is likely.

Bradford Trade with America.

With the end of December we are to see the business actually done between this center and your side, and the returns for last month clearly indicate that an extended trade is going to be done between Bradford and the United States under the new tariff. There were very big shipments of wool dress goods and linings, as well as worsted coatings, and we think there is evidence that English made fabrics have still a preference with many people on your side. The shipments of English wool showed a decline compared with December, 1912, and there was an increase in Colonial wool. The shipments for the whole of the twelve months come to a total of £2,592,583 compared with £3,066,761 for 1912, or a decrease of £474,179.

BRADFORD CORRESPONDENT.

The Wensleydale sheep is one which has attained great popularity in this country, largely on account of its hardy constitution and the splendid quality of wool which it grows. Though kept largely in the north of England it has done well down south. Yet as a breed whose native habitat

is the wild hill country of Yorkshire, it has proved itself well worthy of being known as a distinct type, and the society devoted specially to its interests is doing some really excellent work. That the breed is doing well, is amply illustrated by the fact that at a show and sale held recently, the explanation given why the number of exhibits was less than usual was that there had been a good demand, and breeders having made many private sales, had not so many ewes or rams to place in open competition or for public sale. The highest price made in the aged ram class was £31 10s. The first prize shearling ram made £17 6s 6d, this figure being made in the class open to exhibitors who kept more than ten ewes. The next best price was £15. The Yorkshire ram sales have also given evidence of the position held by the Wensleydale, where six rams of this breed made prices ranging from £3 2s 6d to £6 5s 0d, the average price being £4 3s 9d.

QUALITY NOT IN DEMAND.

The lamb market for the past few weeks has been very discouraging to the feeder who finishes his stuff. A margin of only 25 to 40 cents has been given ripened lambs over rangy stock that is only in fair flesh. This condition reflects on the criticism laid at the feet of the western cornbelt feeder for lacking facilities to carry his mutton past the warmed-up or half-fed state, and lends encouragement to the handler of Merino stocks or the less-compact mutton types. The ideal of the trim-lined, firmly-ripened, 70-pound block fades away as visionary to the hard-headed man who must reap his profit entirely from mutton and lamb transactions. Carcass ideals as determined by the dressed sheep contests by the highest class retail trade or by the agricultural college teacher, do not meet the requirements of commercial trade at all. While the feeder may not be able to offer cogent arguments to support his type, the financial return has furnished the real indication of public taste. It is indis-

putable that the average American consumer demands lean meat. It is also cavil that it is cheaper to put growth gains on than fat, less feed per pound of gain supplying the index. Hence in spite of the fact that such animals and such carcasses are condemned as plebeian, it appears that for years to come economic necessity will yield larger average profit to the man who respects these issues.

J. E. P.

HOW THE WEATHER BUREAU FORECASTS STORMS, FROSTS AND FLOODS

Many people have an idea that there is something mysterious and occult about the work of the Weather Bureau in forecasting the coming of storms, frosts and floods. Not a few think that the observers must necessarily get their data by reading the planets, the stars and the moon. As a matter of fact the forecaster of the Bureau foretells the coming of disturbances in a businesslike way, very similar to that in which a man who has ordered a shipment of goods would estimate the date of its arrival.

Suppose a business man had ordered a carload of pineapples from the Hawaiian Islands. He would know the average time it would take the steamer to make the trip to the Pacific port, the average time for unloading and loading into refrigerator cars, and the average number of days to be allowed these cars for their trip across the continent to New York. His estimate however, would be subject to error because the steamship might be delayed by fog, or the cars might meet with an accident.

Storms, like pineapples, as a rule do not originate in the United States. They come to us, some from the Philippines, Japan, Siberia, Alaska, Canada or the Gulf of Mexico. The Weather Bureau gets cable, telephonic or wireless notice of a foreign storm. Station after station, or vessel after vessel reports the storm's arrival in its neighborhood, so that the general direction and rate of progress can be de-

terminated very nearly. In fact, the arrival of some storms can be foretold ten days in advance.

The forecasters watch for the region of low barometer which is the storm center around which the winds blow. This whirl or eddy moves bodily forward with the general eastward drift of about 650 miles a day in our latitudes. As the lines of equal pressure (isobars) around the low center crowd closer together, the winds attending the storm increase in force. The forecaster determines the direction of the movement of the storm and its velocity.

When weather disturbances are reported, the forecasters know from experience about how long it takes them to reach our Pacific coast, and then how long after they will reach the Atlantic coast. For example, if a storm coming from Siberia drifts eastward around the North Pole and reappears in Alaska, it should appear in Washington or Oregon in about two days; should get to the Great Lakes in six days and to the Atlantic coast in seven or eight days.

Unexpected conditions may delay storms or divert them from the straight track just as a refrigerator car may be thrown off its schedule or be shipped by accident on a wrong road. Some of these storms deplete themselves by running into regions of high barometer which are of greater magnitude and extent than the storm itself. Some of them, however, travel completely around the world.

To keep tab on cold waves that come into the United States from Canada and Alaska, the Weather Bureau studies the Canadian weather reports. England sends reports from Iceland, British Islands and Continental Europe, and daily reports come from St. Petersburg on the conditions in Russia and Siberia.

The same businesslike system used in tracing the track of a storm is applied in determining the arrival of frosts.

Flood forecasts are made in much the same way. Information as to the amount of rainfall at the head waters

of streams that cause floods are covered by telegraphic reports sent by local observers. As this rain reaches the main channel, the height of the water in the channel is determined by successive gaging stations. Past records establish how much a height, say of twenty feet at Dubuque, Iowa, will produce at Davenport, another station eighty miles down the Mississippi. This plan is followed all the way down the river, and at each point full allowance is made for the effects of water from tributaries, and from additional and local rainfall. As a result of these observations in the recent flood, the people of Cairo had warning a week or ten days in advance. The Pittsburgh district can be given only twelve to twenty-four hours' notice, because a flood is upon them within twenty-four hours after a heavy rain-storm.

SHEEP IN WINTER.

Our English correspondent makes the following observations:

The remarkably mild weather which has been experienced in many parts of the world during the past autumn, and so far during the present winter, has not contributed to the best interests of some sections of the communities who are supposed to benefit by a large consumption of wool and the materials into which it is manufactured, and it is also questionable whether the animals which produce the raw material have been living under conditions which are ideal. Mildness in any season is always appreciated by the human race, but the coming of a winter storm is in consequence more detrimental as well as considerably more disagreeable, and exactly the same principle applies to the sheep. We question very much whether the sheep flocks of any country where there has not been a moderate degree of frosty weather will be really in as good heart as they are now that they have come a long way through the worst part of the year with very little of the "cold snap" having been experienced.

We go in strong for constitution in

sheep and the maintenance of the best possible degree of physical vigour. We believe that strong vigorous sheep produce wool of like nature. Our knowledge of the uses of wool and of its production is extensive enough for us to be fully aware that the grower ought to have no place on his holding for unprofitable beasts which do nothing but walk about the place and live a sort of retired life. The sheep which does not pay is a disgrace not only to itself, but to its owner as well. Yet we cannot ignore the fact that the best sheep growing the best wool do not spring up spontaneously like mushrooms during a warm autumn night. They can be grown if the sheep man is alive and knows his job, and there is no time of the year when he has more need to be hustling than during the winter season when feed is scarce and Old Sol is in a less kindly humour.

The breeder of sheep in America is not going to be left out in the cold; he is going to have a better look in in years to come than he has had in the past, that is if he is up and about, and we want to say right here that the man who almost loves his sheep and treats them as if he wants them to pay, will not be deprived of his reward. We have had experience in sheep ourselves and like to talk about them in a practical way. Our story is not a new one, there is nothing new to say, but there are new men in the trade, and we want to say to them what we would have said to others, and that we will say now. The secret of it all is that the flock needs well feeding. They pay for it. Whether the days are dull and wet or sharp and dry, give them something to fill the stomach and nourish the blood. Supplementing the pasture with corn and other foods is exactly the thing for keeping down tape worms as well as taking the place of the nutriment which can be had more easily during the summer season.

In 1900 Australia produced 100,000,000 million pounds of butter. In 1911, the product was 212,000,000 million pounds.

FIELD PEAS.

(By A. H. Vogeler.)

Flattering reports as to the feed value of Field peas have reached us from time to time during the past five years.

Utah, Idaho, Montana and Wyoming are recognized as the leading sheep producing states in the Union, and true they have raised the lambs, but the main profit on these lambs has made many a Colorado farmer independent, by finishing them on field peas. It is not because the Colorado farmer is so much brighter than the flockmasters of the above states, but the Colorado farmer has given the subject of sheep feeding a thought and has coined that thought into dollars.

In a recent visit through Colorado, many of the sheep-feeders assured us that the profit has been greater in feeding the sheep than the original flockmaster could have made in raising the sheep in the first place.

The peas are a hybrid of many of the hardier varieties. Successful crops are produced at an altitude of 9,000 feet. The plant is very hardy notwithstanding late frost in spring, and growing into late fall. They are splendid growers reaching the length of from four to six feet, the vine continues to blossom as it grows, ripening peas on the lower branches and forming more pods above.

It is claimed as a well known fact that sheep and hogs can be fattened at less cost on peas than on any other article.

Stock growers everywhere should grow Field peas.

Time of Sowing.

Being very hardy the fear of rotting in the ground is not considered. The majority sow in April, although the pea-hay crop can be obtained if sown as late as in July. Early sowing is best, giving full season for matured crop.

Quantity to Sow.

When early sowing is made, 50 to 60 pounds of seed per acre makes a crop that covers the ground and produces good tonnage. If late sowing is made, 60 to 80 pounds per acre is

advisable, as the crop does not get to matured growth. Thick sowing will aid in choking out weeds.

The Utah Stock pea does not exhaust the soil rapidly like some crops; quite the opposite, the nitrogen taken from the air is stored in the ground, through the roots. The growing crop can be plowed under when but partly matured—just in the milk—and makes an excellent fertilizer. Orchardists are learning this and consider the crop valuable for this purpose alone.

Harvesting.

If wanted as a pea-hay the growth should be at the period when the supply of nutriment in milk is in the vine just forming the pod, cut and cured like ordinary hay. This makes finest feed for dairy cattle; in fact, lambs,

There is no waste by this method of feeding. The lambs pick up every spear of hay, and even paw the peas out of the ground, when they have been covered up by the tramping of many hoofs. Lambs will grow fat on ground when hardly a pea can be seen, or a spear of anything growing. The lambs are not fed any grain or any hay. They are shipped to market just as they come from the fields. Some growers reserve a small patch of peas upon which they turn their lambs to top them off, just before shipping, cleaning up this ground with a band of hogs after the lambs have been shipped. Hogs are often fed with lambs on the same patch of peas."



Rams on the Kimble Ranch, Hanford, California.

sheep, hogs and cattle relish this hay. If the peas are desired as dry grain, allow crop to mature and handle in shocks, threshing by machine, after thoroughly dry. The dry seed can be ground into a meal, or be fed whole.

Since sheep and hog feeding is now attracting much attention in the west, we beg to quote what is said by a prominent rancher in San Luis valley:

Feeding Lambs or Hogs.

"Lambs or hogs to be fattened are simply turned in upon the peas and are given plenty of water to drink. The lambs eat the vines for roughness, and pick up the peas for grain. Eating the peas one at a time, as they have to, they eat more slowly and so avoid the danger of over-feeding.

Fattening Hogs With Field Peas.

With hogs, the vines may be raked up and threshed for seed. The hogs will pick up every pea from the ground, eat and digest it. Hogs may be run with lambs or cattle on pea ground to advantage. They eat and like the straw as well as the grain. Pork from peas is equal to that from corn. Threshed field peas pay about the same as a good crop, with very much less expense.

Quality of Pea-Fed Mutton.

The mutton from lambs and sheep fattened upon peas is of a peculiar good quality. The lean meat is rich in color, the fat white, the flesh firm and of the best flavor. Pea-fed mutton tops the Chicago market when finished in good shape.

Our State Experimental Station has issued literature referring to results of stock feeding with Field peas that give evidence of no little importance.

A. H. VOGELER.

MEETING OF THE AMERICAN NATIONAL LIVESTOCK ASSOCIATION.

The seventeenth annual convention of the American National Live Stock Association met in Denver, January 20th to 22nd. This convention was a most successful one and it was well attended by stockmen from all parts of the country. The American National Live Stock Association is unfortunate in selecting its time of meeting, on the same date as the Denver Live Stock Show. The meeting of the association brought hundreds of stockmen to Denver who would not come on account of the show alone. Some of these delegates, however, after attending one session of the association's meetings go out to the stock show and henceforth are not present at the meetings of the association. The officers of that organization appreciate this difficulty and it is doubtful if another meeting is held in Denver during the days of the Live Stock Show. The next meeting will be at San Francisco during the exposition.

However, in spite of the stock show, the Denver convention was a most excellent one. It was marked by high class discussion and a feeling of extreme good will toward the organization. As an evidence of this feeling and the esteem in which the stockmen hold the American National Live Stock Association, over \$15,000.00 was raised in thirty minutes to conduct the affairs of the organization during the year 1914. Mr. Jastro of California, one of the really big men of the country, was again elected president. T. W. Tomlinson of Denver was re-elected secretary and we presume that he will continue to be elected as long as he cares to serve in this capacity. Mr. Tomlinson is one of the few great rate experts in the west and in this capacity has brought about an adjust-

ment in live stock freights that is yearly saving to shippers thousands of dollars. The cattleman can well afford to support the American National Live Stock Association, for every dollar that they put into it will return them a hundred fold.

BOSTON WOOL MARKET.

Territory—Only a few houses have any quantity of territory wool to offer at the moment and with these houses the lines are very much split up. Sales in the local market during the week have been limited indeed. A line of clothing wool is reported running well up towards a million pounds at a clean cost of around 52 cents for the best wools, although some dealers are asking 53@55 cents for their best fine wools at the moment. Sales in the market have included a little of everything, some 50,000 pounds of Utah being sold at 16 cents in the grease or about 48@49 cents clean. Some buying is also reported at around 15 cents or about 50 cents clean basis. A little Montana three-eighths wool is reported on private terms but fully 46 cents clean basis and possibly 47 cents.

Scoured—Considerable scoured wool has been moving to the mills, at full rates as compared with last week. No. 1 New Mexican has been bringing 48 cents easily and dealers now want a half dollar for it. Fine territories have sold at 51@52 cents for the best wools and good double. A wools have brought 52@53 cents for the best selections. High B's have sold at 43 cents but average lots of Eastern have brought 40@42 cents. As are quotably at 43@46 cents, according to quality Grey B's have brought as high as 35 cents for choice lots.—Commercial Bulletin, February 7, 1914.

LIVING NOT HIGH.

As a demonstration of what can be done in the way of setting a table on a small sum and to in a measure counteract the constant cry about the high cost of living, ten girls of a cooking class at the Billing high school served a dinner to thirty busi-

ness men one day last week, charging them 25 cents each and showing a profit. The work was all done by the girls under the direction of the Domestic Science teacher. The business men pronounced the dinner a banquet.

REGULATION TO FOLLOW.

Tired of two telephone systems, with their accompanying expense and bother, a movement has been started by the business men of Billings to get rid of one. They have formed an organization which has for its purpose the choosing of one telephone system and excluding of the other. This action follows the disclosure in court recently that both systems are owned by the Bell company.

THE IMPORTED MEAT SITUATION.

The foreign meat situation exhibits few new developments. Since January 1 shipments direct from the River Plate to the United States aggregate 42,000 quarters of beef and 31,000 carcasses of mutton, most of which is yet to arrive at New York. On Monday 2,000,000 pounds of beef and mutton from Australia reached Seattle. Although a meat-laden boat direct from Buenos Ayres reached New York last week, receipts were somewhat less than the previous week, only 5,832 quarters of beef reaching that port, against 14,311 quarters the previous week. Only 2,122 quarters came direct from Argentina, 2,710 quarters being sent via Liverpool. All was chilled beef from Argentina excepting 1,000 quarters of Australian beef that came via England. February receipts of frozen stuff at New York promise to be generous, and if eastern cattle continue running freely difficulty may be experienced in maintaining present prices in the west.—Breder's Gazette.

If the railroad will not put in a pair of scales at your stockyards, the stockmen should club together and put them in. Stock trains all move faster when the stock is weighed at both ends.

WOOL BAGS

TWINE { PAPER }
& JUTE } *for* TYING FLEECES

BEMIS BRO. BAG CO.

SAN FRANCISCO, CAL.

BEMIS BRO. BAG CO.

SEATTLE, WASH.

BEMIS OMAHA BAG CO.

OMAHA, NEB.

EXPECTATION vs. REALIZATION

IN DIRECTING your shipments to market, are you influenced by previous known results of the "Selling End" of those to whom you consign, or are you influenced by the "Soliciting End"—an influence that can have no bearing upon the results to be obtained.

OUR EFFORTS, time and ability are directed solely to the "Selling End." The successful handling and marketing of your shipments. It is the "End" that produces market results—for you in dollars—for us, satisfied customers—"Our Solicitors."

DO YOU appreciate this? If not a patron—investigate our methods. Our work will bear inspection, as will also our record for Successful Salesmanship.

If you desire good service and best market results YOUR EXPECTATION
CAN BE REALIZED by direct consignment to

W. R. SMITH & SON

Who Handle Nothing But Sheep

JOHN SMITH

J. C. EASTES

WM. R. (Bill) SMITH

SOUTH OMAHA AND CHICAGO

President Hagenbarth Uses and Recommends

"THE ONLY PAINT THAT SCoured PERFECTLY"

Wyoming Experiment Station Bulletin 93

KEMP'S

AUSTRALIAN BRANDING LIQUID

President Hagenbarth in his Address to the National Wool Growers Association, in Convention January 15, 1914, at Salt Lake City, said in part:

"Where it is necessary to brand permanently, Kemp's Australian Branding Liquid, or some equivalent, should be used."

A resolution was passed by the National Wool Growers Association, which in part states:

"Particularly do we urge that insoluble paint brands be eliminated wherever possible."

KEMP'S STAYS ON AND SCOURS OUT

"Kemp's Branding Liquid did the business alright this season. I was skeptical regarding it, but I expect to use it next year on all of my sheep."

E. O. SELWAY,
Dillon, Montana

"We branded 100,000 with Kemp's. It stays on through the year and can also be removed from the wool when scoured."

WARREN LIVE STOCK CO.,
Cheyenne, Wyoming.

ASK ANY WESTERN MERCHANT
WILLIAM COOPER & NEPHEWS, Chicago, Ill.
SOLE MANUFACTURERS

Utah, Idaho and Nevada Distributors, **SALT LAKE HARDWARE COMPANY, Salt Lake City**
Oregon " **CENTRAL DOOR & LUMBER COMPANY, Portland**
Montana Branch, **C. F. WIGGS, Manager, Stapleton Block, Billings**

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1914 WOOL PRICES.

About January 20th wool buyers began contracting wool in Utah and a few days later contracting started in the Soda Springs country. Up to this date, February 8th, about 8,000,000 pounds of wools has been contracted for in the territory mentioned. Contracting is still going on and at the present rate eastern Idaho and Utah will be cleaned up before shearing starts. In southern Utah prices have ranged for heavy clothing wools from $12\frac{1}{2}$ to $13\frac{1}{2}$ cents which prices are about the same as paid last year, but in some cases a half cent higher. One large clip near Salt Lake City that sold at 15 cents last year has been contracted at $15\frac{1}{4}$ cents with a \$20,000 advance payment. Some of the better Utah wools have had an offer as high as 16 cents. In the Soda Springs country $16\frac{3}{4}$ cents has been paid for at least one clip. The demand for wool seems to be very strong and at least five eastern houses are operating in this territory.

Advice from Boston indicates that that market is as bare of wool as a kitchen floor. The wool that was reported on hand January first was mostly cleaned up during January. From the mills there comes a strong demand for domestic wools to finish orders and to fill new ones. The mills are enjoying prosperous times and some of them even threaten to invade the foreign market with American made cloth. Those in need of wool in this country see no relief in sight by looking to the foreign market, that market is already in much the

same condition as our own. The following is quoted from the London Wool Record of January 22nd:

"The past week's business in London can be summed up as a surprise for everyone, and prognostications freely made on the opening night of the wool sale by almost everyone, have proved to be incorrect. The sales have developed most unlooked for strength and instead of prices falling as many forecasted, the opposite has taken place. We offer no explanation, at this writing, but content ourselves with simply stating the fact. Wools that were offered on January 14th and withdrawn are today often fetching a full 5 per cent advance, and if one goes back to the last few days of the December sales, the improvement is often 2 cents per pound, even on good Merinos. It is really remarkable the development that has taken place, and the sales have about them today some of the old fire and steam which was witnessed in the early months of 1913. The home trade has developed remarkable interest in raw wool, and evidently Yorkshire buyers in particular must either be short of wool and anxious to buy sufficient to keep machinery running, or have stronger faith in the future course of prices."

A cable from Sydney, Australia to the London Wool Record on January 22nd said: "Wool sales have closed at Sydney, the demand being excellent. Competition has been general, and good wools have touched the high point of the season."

From the above facts sheepmen will be able to draw their own conclusions as to the probable course of prices.

We have received many reports from all sections of the range country relative to the condition of the new clip. These reports are most encouraging and indicate that in nearly every section the sheep are carrying one of the best fleeces they have ever grown.

WOOL FREIGHT RATES.

In the issue of the Australian Sydney Wool and Stock Journal for January second occurs the following statement:

"The Australian Minister for Agriculture officially announces the receipt of a communication from the office of Trade and Immigration Commissioner to the United States on the subject of shipments of wool from New South Wales to Eastern woolen mills of the United States, wherein it is stated that as shipments of wool are arriving in San Francisco direct from Sydney for transmission to Eastern woolen mills, it may be interesting to wool consignors in Australia to know that the American-Hawaiian Steamship line is prepared to carry wool from San Francisco to New York for 45 cents per hundred pounds. Present rates are via steamship from Sydney to San Francisco 75 cents, and by rail, San Francisco to Boston, 80 cents per hundred pounds, or a total of \$1.55 from Sydney to Boston. Against this were the ships of the Hawaiian line used the rate from Sydney to New York would be \$1.20; from New York to Boston 14 cents, or \$1.34 cents (via all water route) as against \$1.55 cents the present rate (via steamship to San Francisco and all rail San Francisco to Boston)."

Here it will be noted that our railroads are hauling Australian wool from Pacific coast points to Boston at 80 cents per hundred pounds yet from Nevada points, an average of 550 miles less distance, the rate on our wool to Boston is \$2.00 per hundred pounds; from Boise, Idaho, to Boston, 600 miles less than from coast points, the rate is $2.05\frac{1}{2}$; from Salt Lake City, 750 miles less, the rate is \$1.76 per hundred. From Arizona points the rate on domestic wool is about

\$1.90. In other words, the railroads haul Australian wool from Pacific coast points to Boston at 80 cents per hundred and charge about the same rate on domestic wool from Omaha to Boston, a distance of 1780 miles less.

In the past where the railroads have granted a lower rate from Pacific coast points to Boston than from interior points on domestic wool they have contended that it was because of water competition. This argument however, cannot apply to wool originating in Australia. The railroads have therefore by their own acts established the fact that a rate of 80 cents per hundred pounds is a profitable rate on wool from coast to coast, and they should forthwith be made to establish the same rate on domestic wool in accord with the distance it is hauled. If a rate of 80 cents per hundred on Australian wool from Pacific coast points to Boston is not profitable to the railroads then in order to make up any loss that may result from such a rate the railroads charge a higher rate on domestic wool. A defense of this kind would be untenable and would be so held by any court. It would be a clear discrimination against domestic products and in the eyes of the law would be construed as a rebate to foreign shippers. Unless the roads are willing to establish the same rate on domestic wool as they have now granted to foreign wool it is the duty of Congress to pass a law prohibiting a lower rate on imported products than is given to domestic products.

If a rate of 80 cents per hundred from Frisco to Boston is profitable how can a rate of \$2.00 per hundred from Nevada points be defended?

A NATIONAL BOUNTY LAW.

Among the resolutions passed by the last convention of the National Wool Growers' Association was one asking the federal congress to pass a wild animal bounty law. This is a wise request, and if Congress is really in earnest in desiring to increase the domestic supply of meat, it will heed the request.

A careful estimate has placed the

value of the livestock and poultry annually destroyed by predatory wild animals at \$15,000,000.00. Of this loss more than two-thirds occurs in what is known as the range states, the states that must be depended on to furnish the nation with its cheap meat. It is to these states that the government on every consideration of justice owes a bounty on wild animals. All of these states either now or at some time in the past, have payed liberal bounties on wild animals. These state bounties have materially reduced the number of such animals, but have not eradicated them largely because of the enormous acreage of land in such states that is withheld from settlement by the federal government. The area withdrawn in the form of National Forests alone is approximately 170,000,000 acres, to say nothing of the land withdrawn for mineral purposes,

Have you ordered
your paper twine?
Seventy five per cent
of western wool will
be tied with paper
this year.

game preserves and water power development. We have no complaint to make against these withdrawals, but such land is not open to settlement, and should not be. These lands will therefore continue to be a permanent breeding ground for predatory animals. Such a condition discourages the state in the payment of its bounty and prevents the stockman from extending his holdings. It would seem clear that under these circumstances the government should assist the state in destroying its predatory wild animals.

The most workable plan of a national bounty would be for the government to pay back to the states its share of the bounty paid on the basis of the number of acres of land withheld from settlement in such state. For instance, if a state paid \$100,000

per annum in bounties and one-third of its area was withdrawn, then the government should pay the state \$33,000 as its share of such bounty. This would enable the state to increase its bounty and would induce states now without a bounty to enact such a law.

We hope every stockman and farmer will write both his senators and congressman and ask his assistance in passing a national bounty law.

OUR NAVY.

A few weeks ago the Navy Department desired to purchase 285,000 pounds of beef for the navy. American grown beef was offered at 12½ cents per pound; beef grown in the Argentine was offered at 11.90 or slightly more than half a cent less. These prices were, we understand, for grass fed beef and that produced in the United States was grown on native and hard western grasses and is admittedly the best grass beef in the world. The Argentine meat we are advised had been grown on alfalfa pastures. Now the navy officials have sent out several press bulletins boasting about the saving they made by purchasing imported beef. However if the facts have been presented correctly the navy, in its zeal to encourage the importation of meat, got a beautiful skinning. While it bought Argentine meat at ½ cent per pound less than domestic meat could have been had for the Argentine meat was actually worth three cents per pound less than the domestic.

It has been reported that the administration was anxious to buy imported meat so as to encourage meat imports. We wonder what the moral effect of this will be? If this country is to import everything that can be purchased abroad cheaper than at home then we will not long have use for our farms or factories. If on the other hand the administration bought this foreign meat because it cost less than domestic meat then it should carry this principle to its logical conclusion and hire a foreign Secretary of War. We happen to know of a few million Japanese that would gladly serve as Secretary

of War for decidedly less than \$1,000.00 per month, the salary of our present secretary, and serve more efficiently at that. Since the navy is so anxious to save a paltry $\frac{1}{2}$ cent per pound on its beef we have no doubt that it will have all future Dreadnoughts built abroad where they can be had at \$9,000,000.00 instead of \$14,000,000.00, what they now cost in this country.

The navy is just now asking for \$150,000,000.00 to maintain it during the coming fiscal year. This is a very paltry sum and without doubt the beef raisers of the Argentine and the sheepmen of Australia from whom the navy now buys its meat, will gladly advance this money. In the last fifteen years we have appropriated \$1,660,000,000.00 for the support of the navy. Sixty per cent of this has come out of the pockets of our stockmen and farmers, yet when the navy wants a little meat it buys from the foreign farmer. This principle is un-American, no matter what may be the motive behind it.

SHIPPING TRASH.

A few days since we had occasion to examine a fleece of wool. On opening it up we picked out a dung-lock that evidently had but little wool in it. We weighed this lock then scoured it so as to obtain the amount of clean wool that it contained. Being mostly manure, the wool, of course, was badly stained and was not worth over 40 cents a scoured pound in Boston, if it was worth that much. On this lock the freight, commission charges and cost of scouring amounted to thirty-seven hundredths of a cent. At 40 cents per pound the clean wool obtained was worth but thirty-three hundredths of a cent. Therefore, it failed by four hundredths of a cent of paying the charges of handling it.

We do not mean to charge that very many sheepmen ship trash of this kind, but there must be a few who do, and those few help to discredit the whole American clip. Such trash as this should be kept at home as it worth more for fertilizer than for wool manufacturing.

A FINE BILL.

Congressman Kreider has recently presented a bill in the house providing a fine of \$1,000.00 for any person who publishes in a paper or otherwise any misleading statement about any product or merchandise. We feel that this is one of the best bills ever presented to congress and it should be passed forthwith. In its influence for good and as a factor in reducing the cost of living it is more important than the currency measure recently passed. Some of the papers of this country are filled with rotten, fraudulent advertisements that are costing the people hundreds of millions each year, and unfortunately the people who are being robbed are the ones least able to stand it. Not a month goes by but what some fake advertisement is submitted to the National Wool Grower for publication.

The National Wool Grower will try to keep its pages free from fakes, but Congress owes it to the public that fake advertisements of all kinds be driven from the press of this country.

FOR SHIPPERS' PROTECTION.

Every contract signed for the shipment of livestock contains a clause limiting the liability of the railroad for damage to such shipment in the case of sheep to \$3.00 per head, and in the case of cattle to \$50.00 per head in most instances. The exception to this very low liability is the Oregon-Washington railroad, where they limit the liability in the case of sheep to \$5.00 per head. In the event that the shipper refuses to sign his contract containing this limited liability the railroad materially advances the rate. If a shipper valued his sheep at four dollars per head under the contracts the rate would be advanced ten per cent. With few exceptions livestock is the only commodity shipped in which the railroads limit their liability below the market value of the product. The courts have ruled that when the shipper signs this livestock contract he cannot recover damage beyond the sum specified in such contract.

There is now pending in Congress a bill preventing the railroads from limiting their liability below the market value of the product moved. The State Railway Commission of Iowa in connection with the Cornbelt Meat Producers' Association, have filed a complaint before the Interstate Commerce Commission asking that the railroads be compelled to cease limiting their liability in livestock contracts below the actual market value of the stock shipped. The National Wool Growers' Association and the American National Livestock Association have also joined in this complaint.

OPPOSING A PURE CLOTH LAW

Just recently the National Wholesale Dry Goods Association met in New York City, the citadel of the jobber, and passed resolutions condemning the passage of any of the pure fabric bills now pending in Congress. These jobbers advocated the passage of a law similar to the British Merchandise Marks Act, the said act being a hazy, evasive useless instrument so far as adulteration of woollen goods is concerned. No doubt it would be very satisfactory to these dealers but it happens to be the public that is demanding a pure cloth law.

We take it that Congress is not going to pay much attention to the opposition of these jobbers, in fact, we believe that such opposition will go a long way toward passing the law.

PROFITS ON SHEEP IN ENGLAND.

A prominent sheep breeder of England who has for thirty years maintained a flock of Hampshire sheep for mutton purposes gives the following figures as the average cost of maintaining a flock of 1,000 ewes for one year.

Costs.

Feed for ewe and lamb including cake and pasture, all labor costs, interest on sheep, 5 per cent deducted for loss, cost of rams, etc., \$6,290.00.

Income.

The following items are given as the average income for a year like 1912

or 1913, to be expected from 1,000 breeding ewes:

6580 lbs. washed wool @ 22c	\$ 1447.60
100 Prime wether lambs	
@ \$12.25	1225.00
100 Good wether lambs	
@ 11.00	1100.00
200 Good wether lambs	
@ 8.55	1716.00
150 Cull wether lambs	
@ 7.35	1102.50
100 Fair ewe lambs	
@ 9.80	980.00
90 Small wether lambs	
@ 8.58	772.20
320 Fat old ewes	
@ 11.00	3520.00
Sale of cull rams and pelts	45.00

Total Income \$11,908.30

Expenses 6,290.00

Net Profit \$ 5,618.30

Profit per Ewe 5.62

This breeder estimates that 1,000 ewes will give an average increase of 1,100 lambs and on the basis above figured 1,060 sheep have been disposed of leaving a net increase of 40 head but this goes to cover losses. It seems, however, that on the basis above given only 680 breeding ewes would remain unless it be the practice to breed the ewe lambs. If this is not the case then to this item of cost would need to be added the expense of carrying over 300 ewe lambs to breeding age.

What we most desire to call attention to by these figures is the magnificent price received for live mutton and lamb. These old ewes brought \$11.00 per head and if they weighed 140 pounds this is 8 cents per pound. In this country such ewes even in times of highest prices seldom reach 5 cents per pound. The lambs here sold were probably six months old and weighed around 100 pounds. The tops therefore brought about 12 cents per pound and the balance about 11 cents per pound. These are not unusual prices abroad for the present market is actually higher.

High prices for mutton and lamb come only when the people have learned to eat such meat. These

prices should encourage every American sheepman to assist the National Wool Growers Association in its campaign to encourage a greater use of this meat.

THE REINDEER ONE OF ALASKA'S IMPORTANT INDUSTRIES.

There are not less than 30,000 domesticated reindeer in Alaska today, according to estimates of the Department of Agriculture. This means that the reindeer industry is by far the largest agricultural proposition in Alaska at this time, and more stringent government measures should be taken to prevent the rapid destruction of these animals. The industry under scientific management should develop rapidly, according to experts, and the present herds form a very promising basis upon which a great industry may be built.

It appears that there have been instances of cross-breeding domesticated reindeer and the native wild caribou. It is thought that the blood of the latter could be used to good advantage in building up the reindeer herds. At present the domesticated deer seem to decrease in size and otherwise degenerate because of the lack of careful selection of breeding animals. The caribou are superior in size and vigor, but are not of so wild a nature as to make their domestication impracticable.

That portion of Alaska which offers the fewest other agricultural opportunities is the region best suited to the reindeer. So the industry may be developed without encroaching on other lines of farming. The existence of white reindeer-moss in all the Arctic region of Alaska permits the occupancy of vast regions that would otherwise be uninhabitable. The reindeer subsist mainly on this native herbage winter and summer. They require no shelter and little care beyond the restraint of a herder to keep them from wandering. The meat is of excellent quality and the skins are valuable. In Europe the deer are used for dairy and transportation purposes,

and while little attempt has thus far been made in our territory along these lines, there are possibilities of similar development.

At present the individual ownership of reindeer is principally restricted to Eskimos and Indians. Some of the missions still possess herds and there are a few government herds. No breeding deer may be sold to whites. The Alaska division of the Bureau of Education has supervision of all herds, the teachers of the government school for native children located nearest a herd having immediate charge.

Besides the promising status of the reindeer industry in our Arctic possession, cattle and sheep raising, fruit raising and the problems of the homesteader in the far north are extensively treated in the Department of Agriculture's new bulletin, "Possible Agricultural Development in Alaska."

According to the investigators, there are unsurpassed cattle and sheep raising lands to be found on the Alaskan islands and in certain places near the shore on the mainland. Winter forage for cattle and sheep is provided largely from the native grasses, both hay and silage being made. The practicability of raising stock, however, except in small herds close to individual farms has not been sufficiently investigated to warrant more than an intimation of its possibilities. There are serious obstacles to be considered: The long winters, boggy land, mosquitoes and carnivorous animals. These objections, however, do not interfere seriously with the reindeer industry.

SUGAR BEETS IN MONTANA

The Billings sugar factory closed its campaign of almost four months January first and established several new records. The factory this year cut the product of about 23,000 acres of sugar beets, or about 4,000 more than last year. The total tonnage sliced this year was 240,000 tons, for which the company paid the farmers about a million and a half dollars. Exact figures on the output and business of the season have not yet been compiled.

The Eastern Sheep Situation

(By ROSCOE WOOD)

THE YEAR 1913, with its surprises and disappointments for the American sheepman is gone, and most of us are glad of it. For the western sheepman weather conditions were generally ordinarily favorable, some few localities excepted which only prove the rule. Wool clip and lamb crop were likewise in fair condition and lambs brought a good price generally, although in many sections weights were not what they should have been. Wool returns were disappointing to most growers, and there are no doubt plenty who are even yet awaiting their returns! The ruling party in power, and especially its head, considers sheep and wool growing an illegitimate industry which is largely located in the northern and western parts of this country, therefore it should be forced to market its products in open competition with all the world and be given a little handicap in production costs and transportation charges in the process.

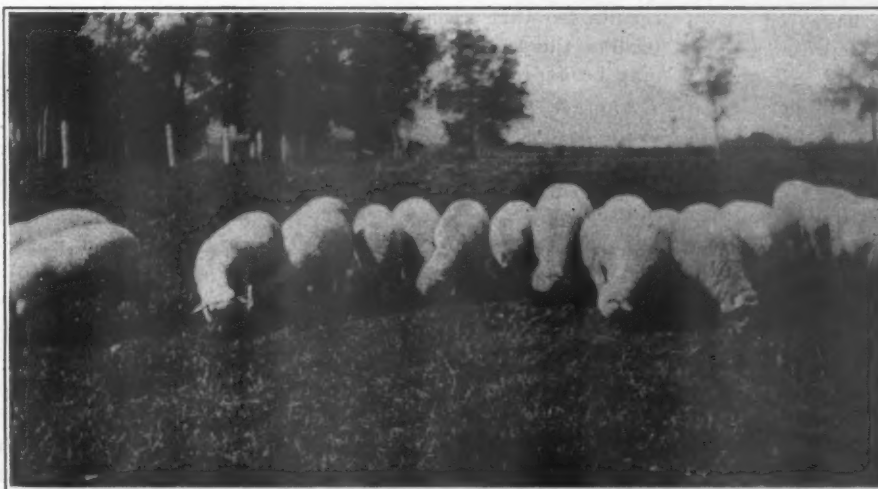
Most sheepmen have a very good idea of western conditions, but the situation among the farmers east of the Missouri river who raise sheep may be interesting. Generally speaking since the summer of 1912 there has been a large reduction in the number of sheep kept on American farms. From various sources of information covering no small part of the farm states which have always kept sheep comes practically a unanimous voice. Fear of tariff legislation was the main

factor in causing this disposal of sheep from many farms, but there were doubtless other lesser contributing causes. Many farmers became scared in the fall of 1912, and sent their entire flocks of ewes to market while others reduced to small proportions.

Large market receipts on the surface do not indicate at once a curtailment of the business, but the local woolbuyer's business totals are a good indicator of the size and character of the sheep industry. Most sections report much less wool in 1913 than in previous years. Stocks of fleece wools

Chicago and Buffalo markets report smaller marketings of native lambs than formerly, which but add further proof of the reduction. There has also been some marketing of breeding stock during the last fall, with but few new ewes put in their place. Lower wool prices and in some sections unsatisfactory market conditions have discouraged farmers from raising sheep. Those who sold their wool early last spring before the no-wool-tariff program became known were more fortunate than their more dilatory neighbors. However, we believe that the liquidation period is over, and if wool and lamb prices are sustained this coming year that this reduction period has passed the low mark.

While reductions have been made in farm sheep stocks we believe that those who are now raising sheep will continue, and that there will be little more shrinkage in numbers. Nearly all the best breeders re-



Hampshires owned by A. W. Rucker, Morrison, Colorado.

on hand either in growers' or local dealers' hands are said by men who know to be the smallest in years, while there is no fleece wool for sale in eastern markets. Both mills and eastern buyers are traveling the fleece wool section for wools. Present market indications are that there will be but little difference in price between the Merino wools and the coarser wools, in the grease, and if foreign markets maintain their present strength there is little likelihood of general prices lower than prevailed last year.

port good sales last fall, and many of them are completely sold out. This is as it should be, for it shows that there are still good farmers who believe in sheep and taking pains to secure improvement by the use of pure-bred rams. The men who are sticking to their business are those who have found sheep profitable, and they are not shifted by every change of the market. They realize there is nothing in this world that stands still and that sheep values fluctuate no more than do other products.

There are sections which are close

to large centers of population in which farmers have changed from sheep to dairying because of the demand for milk and butter, and in those sections the sheep must undoubtedly give way to the cow. But in sections more remote where transportation plays an important place in the amount of returns to the producer the sheep will find a place on the farm according to the adaptability of the farm and the fancy and good sense of the individual farmer. Labor is no small item which farmers must consider nowadays, and with its scarcity and high cost must be carefully and economically handled in the farm curriculum. Owing to the requirement of a minimum amount of labor and that at a time when other farm operations require but little the sheep hold a distinct advantage over other classes of live stock.

While wool prices have not been satisfactory, declines representing 20 to 40 per cent from 1912 prices, the market for fat lambs has been good most of the time, so that this part of the farmer's sheep crop has paid, if he has taken proper care of it. Where good results have not been obtained it has generally been due to the carelessness of the grower. Many men have an idea that because they are sheep they need no care and only such feed as nothing else will consume, and then if the sheep is not the biggest money-maker on the farm they consider them of no account, and change to something else. To grow good lambs requires care when they need it and proper feed, but when given such care and feed there is no stock on the farm that returns a greater percentage of profit.

The season was favorable as to weather and pasture. Dry weather is always good for sheep. Less trouble from parasites and better growth of lambs than usual was experienced. Those who carried their lambs after weaning as well as feeders who bought western lambs secured good gains at a minimum expense.

The feeding situation is also changing. Michigan used to feed more sheep and lambs than any state east of the Missouri river, but this last year

Iowa has taken first place. Drought and high feed prices in Michigan were a strong factor in reducing feeding operations, while just at the present time there seems to be a large movement of Michigan farmers toward dairying. Milk products bring good prices and a monthly or weekly income even though less in the aggregate seems to have greater attraction than larger profits more easily obtained but naturally more deferred. On the other hand a generally good corn crop in Iowa with plenty pasture, with stock and feeding cattle scarce and high in price, with much disease and heavy losses among hogs, added to an increasingly difficult labor problem all combined to make Iowa farmers the strongest bidders for feeder lambs and sheep last fall. Favorable weather for these feeders has produced good results, so that keen competition for feeders this coming summer and fall may be expected from this section.

Another tendency quite noticeable in the east is the dispersal of purebred flocks. Time was when Michigan and Ohio furnished many carloads of rams for western use. The establishment and development of breeding flocks in the west has forced out of existence nearly all of this business. Only those flocks remain which are handled by men who are real breeders and who produce the choicest animals. Being handled in small numbers and given individual attention these flocks often produce better animals and show greater average improvement than can flocks handled in large numbers. So that to these flocks can the average sheepmen look for new blood in the most improved form. The western competition and the development of a mutton market has made the raising of average rams unprofitable. When farmers can market their lambs for mutton at twelve months old all in one lot and secure an average \$10 per head, which is being done, there is no inducement to carry rams to secure present current prices and in addition take chances on finding a market.

In some sections where sheep strong in Merino blood have been bred the farmers have taken fright at the

reduction in wool prices and either have sold their sheep or taken to crossing with rams of English breeds. This movement has been aided and accelerated in no small measure by the teachings of certain parts of the agricultural press and of theoretical instructors in some of the agricultural colleges who wilfully disregard conditions and actual experience. If some of these fluent writers and book-crammed theorists would study sheep on the farms where they must be produced and had to figure how to pay their interest, taxes, and the hired man instead of turning in their bill for the business office or the state to pay they would not be so free with their advice to throw out the Merino sheep. It is a fact established by the financial returns of individual farmers and the aggregate wealth of entire communities that men and localities who have continuously maintained flocks of Merino sheep which grew a good fleece of wool and good marketable carcass have best demonstrated the constant profit of sheep raising on the farm.

It seems to be an American characteristic to want a chance and the farmer seems as susceptible to this malady as anyone, especially with reference to his livestock. He takes too little cognizance of his conditions and is too prone to follow the crowd. When beef is high he thinks to grow steers, or if butter brings an attractive price he buys more cows, increasing the cattle and doing away to a great extent if not altogether with other classes of stock. And so it is with breeding. They are trying every new breed, and cross and recross until they eventually produce scrubs or nothing. Sheep are the shuttlecock which is discarded with every swing of the price pendulum to the wrong side, and this last general movement of driving sheep from the eastern farms has been incited more by fear of what might happen than by the actual occurrence. Everything has its ups and downs, its bright days and its dark, and the last year has been one of the gloomy periods for sheep. Such times have been before and will un-

doubtedly come again. Incidentally, they are the times when the wise man replenishes and improves his flock preparing himself for the good times coming when he will be rewarded with ample profit for his faith and persistence.

Since the summer of 1912 sheep on the eastern farm has had a continual struggle to maintain his place thereon. Political upheaval, financial stringency, low prices for wool with proportionately high prices for other farm products, and withal the appearance of that recurring period of uneasiness and desire for change on the part of the farmer who, like many others, does not know what he wants, but he wants something different, all these have been factors working to put the sheep off the farm. That he has been forced to go in many cases is unquestioned. That he must stay off, and many more go, is an entirely different proposition. We have been with sheep too long to believe that present conditions justify any such conclusion.

With the population rapidly increasing, with present costs of production and with a probability of a still greater increase in such costs, with other meats and food products on a comparatively high level and little probability of a great increase in their production or of a fall in price, we believe that the price of mutton together with the value of the wool clip will make the profits of sheep growing so attractive that it will only be a question of a short time until men will want to buy sheep as anxiously as now they have wanted to sell. There are many sections where conditions are right for raising sheep profitably, and in those places we do not believe that they will be displaced by any other class of live stock.

When the Panama canal is completed the rate on wool from Sydney to Boston will be \$1.34 per hundred.

There are less sheep in the United States today than at any time in the last thirty years.

LEASING PUBLIC LANDS.

The American National Live Stock Association, in convention assembled, at Denver, Colorado, January 20-22, 1914, hereby declares that:

We believe that the prosperity and development of the stock-raising industry on the public grazing lands of the arid and semi-arid west are seriously threatened by the present indiscriminate methods of grazing, and that thereby the permanent value of such lands is greatly impaired; and we strongly recommend the early passage by Congress of a bill providing for federal control of these unappropriated public grazing lands, and a just and reasonable method of leasing such lands.

We favor the adoption of the Kent bill, House Bill No. 10539, now before Congress, as the best possible measure to protect and build up the livestock industry, except that we recommend that the words "nor less than one-half cent per acre" (page 2, line 18) be stricken from said bill.

A BILL TO LEASE THE PUBLIC DOMAIN

As the question of land leasing was discussed in our last National Wool Growers Convention we herewith publish the Kent bill now pending before the public lands committee of the House:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled: That the unreserved, unappropriated public lands of the United States shall be subject to the provisions of this Act, and the President of the United States is hereby authorized to establish from time to time, by proclamation, grazing districts upon the unreserved, unappropriated public lands of the United States, conforming to State and county lines so far as practicable, whereupon the Secretary of Agriculture, under rules and regulations prescribed by him, shall execute or cause to be executed the provisions of this Act, appoint all officers necessary for

the administration and protection of such grazing districts, regulate their use for grazing purposes, protect them from depredation, from injury to the natural forage crop, and from erosion; restore and improve their grazing value through regulation, by the eradication of poisonous plants, and by the extermination of predatory animals and otherwise; eradicate and prevent infectious and contagious diseases injurious to domestic animals: issue permits to graze live stock thereon for periods of not more than ten years, which shall include the right to fence the same, giving preference when practicable to homesteaders and to present occupants of the range who own improved ranches or who have provided water for live stock grazed on the public lands; and charge and collect reasonable fees for such grazing permits; based upon the grazing value of the land in each locality: Provided, That for ten years after the passage of this Act such charge for grazing shall not exceed 4 cents per acre nor be less than one-half cent per acre, or the equivalent thereof on the per capita basis, and the Secretary of Agriculture shall revise and reestablish maximum and minimum rates of charge for grazing for each succeeding period of ten years.

Sec. 2. That homestead or other settlement, location, entry, patent, and all other disposal of public lands under the public-land laws shall be in no wise restricted, limited or abridged hereby; nor shall anything herein be construed to prevent bona fide residents from grazing their stock used for domestic purposes, as defined under the regulations of the Secretary of Agriculture, on the public lands affected hereby: Provided, That after the establishment of any such grazing district no form of location, settlement or entry thereon shall give a right to grazing privileges on public lands except when made under laws requiring cultivation or agricultural use of the land: Provided further, That permits to graze stock upon land which is subsequently appropriated under any public land law shall not be affected by

such subsequent appropriation, except as to the land actually appropriated, until the end of the current annual grazing period: Provided further, That no permit shall be issued which will entitle the permittee to the use of any buildings, corrals, reservoirs, or other improvements owned or controlled by a prior occupant until he has paid such prior occupant a reasonable pro rata value for the use of such improvements. If the parties interested can not agree, then the amount of such payment shall be determined under rules of the Secretary of Agriculture: And provided further, That when buildings, corrals, reservoirs, wells, or other improvements, except fences shall have been established on any forty-acre tract to the value of more than \$100, as determined by rules of the Secretary of Agriculture, such forty-acre tract shall not be subject to settlement or appropriation under the public-land laws during the permit period without the consent of the owner of such buildings, corrals, reservoirs, wells or other improvements.

Sec. 3. That all water on public lands or subject to the jurisdiction of the United States within such grazing districts may be used for milling, mining, domestic, or irrigation purposes under the laws of the State or Territory wherein such grazing districts and situated, or under the laws of the United States and the rules and regulations thereunder.

Sec. 4. That no grazing permits issued under this Act shall prohibit settlers, prospectors, and others from entering upon such grazing districts for all proper and lawful purposes, including the use and enjoyment of their rights and property, and prospecting, locating and developing the mineral resources of such districts; and wagon roads or improvements may be constructed thereon, in accordance with law, and all persons shall have the right to move live stock from one locality to another within such grazing districts under such restrictions only as are necessary to protect the users of the land which will be driven across.

Sec. 5. That the users of the public

lands under the provisions of this Act may select a committee of not more than four members from the users of any such grazing district, which committee shall represent the owners of different kinds of stock, and, with the officer appointed by the Secretary of Agriculture in charge of such grazing district, shall constitute an executive board, which shall determine whether the permits for such grazing districts shall be issued upon acreage or upon a per capita basis, shall make such division of the range between the different kinds of stock as is necessary, and shall decide whether the distribution of the range shall be by individual or community allotments. The executive board shall also determine the total number of animals to be grazed in each grazing district and shall decide upon the adoption of any special rules to meet local conditions and shall establish lanes or driveways and shall prescribe rules to govern the movement of live stock across the public lands in such districts so as to protect the users of the lands in their rights and the rights of persons having the necessity to drive across the same. The executive board, after thirty days' notice by publication, shall also determine the preference in the allotment of grazing privileges provided for in section one of this Act, and shall under rules of the Secretary of Agriculture determine the value of the improvements and the use of the same whenever that may become necessary under the provisions of this Act in the administration of the same. Fences, wells, and other improvements may be constructed with the permission of the Government officer in charge, who shall record the ownership and location of such improvements. Any differences between a majority of the executive board and the officer in charge shall be referred to the Secretary of Agriculture and shall be adjusted in the manner prescribed by him. Any interested party shall have the right to appeal from any decision of the board to the Secretary of Agriculture. If the users of the land fail to select the committee as herein provided the President of

the United States shall name such committee from such grazing districts, representing the owners of the different kinds of stock, as above provided.

Sec. 6. That the Secretary of Agriculture shall fix a date which shall not be less than one year from the establishment of any grazing district, and after such date the pasturing of any class of live stock on public land in said grazing districts without a permit, or in violation of the regulations of the Secretary of Agriculture, as herein provided, shall constitute a misdemeanor and shall be punishable by a fine of not less than \$10 nor more than \$1,000, or by imprisonment for not less than ten days nor more than one year, or by both such fine and imprisonment in the discretion of the court.

Sec. 7. That twenty-five per centum of all moneys received from each grazing district during any fiscal year shall be paid at the end thereof by the secretary of the Treasury to the State or Territory in which said district is situated to be expended as the State or Territorial legislature may prescribe for the benefit of the public schools and public roads of the county or counties in which the grazing district is situated: Provided, That when any grazing district is in more than one State or Territory, or county, the distributive share to each from the proceeds of said district shall be expended proportional to its area therein. The sum of \$500,000 is hereby appropriated, to be available until expended for the payment of expenses necessary to execute the provisions of this Act.

Sec. 8. That the President is hereby authorized to modify any proclamation establishing any grazing district, but not oftener than once in five years to take effect in not less than one year thereafter, and by such modification may reduce the area or change the boundary lines of each grazing district.

Every western sheepman can afford to pay the National Wool Growers' Association \$5 per year dues. It will earn many times that amount for him.

Mutton Sausage

—A Place for the Old Ewe

The U. S. Department of Agriculture gives
the following formula for

Mutton Sausage

Mutton Two Pounds

Fresh Lean Pork . One Pound

Fat Pork One Pound

Add Salt and Seasoning to Suit the Taste

Wool Substitutes

(Continued from December Wool Grower.) J. A. HILL, University of Wyoming.

SOME idea of the extent to which wool substitutes are used in the textile industries of the United States may be obtained from the following figures which are based on tables given in the report of the Tariff Board on Schedule K.

In 1909 the woolen and worsted industries of the United States used,
 67¾ per cent of scoured wool,
 6 per cent of Wool Waste and Noils,
 12½ per cent of Shoddy,
 13¾ per cent of Cotton.

This shows that in the year reported on, the proportion of wool substitutes to new wool was greater than 1 to 4. However bad this may seem, it is a marked improvement over 1899 when the proportion was almost 1 to 2. The actual weight of wool substitutes used in 1909 was greater, however, than in 1899. The decreased proportion was caused by almost one hundred per cent increase in the amount of scoured wool used.

The decrease in the relative amount of wool substitutes used in America is ascribed by most writers to the popularity of worsteds. Nevertheless, there can be but little doubt that the continued popularity of worsteds is based on the fact that the American consumer is learning to discriminate against woolens because of the ease with which they can be adulterated with shoddy. This is indeed the ground for some optimism on the part of the wool growers, but it has its darker side too. For a great deal of the wool produced in the range states is suitable only for woolens and hence suffers because the manufacturers so often place it in the bad company of shoddy.

The part of the wool substitute question that is of the greatest practical concern to the flock owner is how to distinguish these adulterants from new wool in finished cloth as it is offered for sale in the stores. Anyone who cares to take the trouble to make a simple chemical test can tell within a

very small per cent the exact proportion of cotton that any alleged woolen fabric contains. Unfortunately there is no such simple method for the detection of shoddy. There is no chemical test that will discriminate between shoddy and new wool, for they are both in fact wool and could have come from the same sheep. A textile expert, especially if he has the aid of a microscope, can reach a pretty definite conclusion as to whether a given piece of woolen cloth contains much or little shoddy, but that is about as far as he can go from the examination of the cloth.

All this brings us to the question of the pure textile laws which, as all readers of Wool Grower know, have been proposed from time to time both in the National Congress and in various legislatures. It is the opinion of the writer that we shall never be able to get a just and workable law that depends for its enforcement on the analysis of fabrics as they are offered for sale.

I think the whole situation will be much cleared up if we face the fact, once for all, that the only place in which the composition of fabrics can be determined with any degree of certainty is in the mills themselves; and that the only way to have a pure textile law that is any more than a name, so far as shoddy is concerned, is to have inspectors in all mills, just as there are now in the packing houses and the textile mills that are working on army contracts. One thing is pretty certain, and that is the mill owners will fight such a law to the last ditch; not so much because it would hurt their business, for they would all be on an equal footing and the more honest ones would gain what the dishonest ones lose, but rather because it would represent another encroachment by the state on private enterprise, another instance of state supervision of private capital which they fear is the entering wedge of socialism.

It seems to me, then, that the wool growers must first of all decide whether such a law will be worth what it will cost. If they decide in favor of the law, the next step will be to educate the consumers to the point where they will demand such a law. This should be easy enough to do in these days when everyone is demanding the federal regulation of everything.

Meanwhile in the absence of any pure textile law, what is the wool grower going to do to protect himself from being defrauded by shoddy when it comes to the purchase of clothing and blankets for himself? So far as clothing is concerned, he will have little trouble in making sure that he doesn't wear a fiber that hasn't come from a sheep by the most direct route. All he has to do is to refuse to buy anything but worsteds. Worsteds cannot contain noils or shoddy, for, as was stated in a preceding paragraph, noils are the short fibers that are combed out in making worsted yarn. It also follows that, since shoddy is composed of short fibers, it could not possibly stay in the yarn through the process of combing. Nowadays one who desires it will have no trouble in having his wearing apparel consist entirely of worsted,—knit goods as well as suiting. As to cotton, anyone who buys it unknowingly is just too lazy to test for it.

Blankets, however, are not such an easy proposition. Of course it is no more trouble to test for cotton here than in worsteds, but there are bound to be short fibers no matter if the fabric is composed entirely of new wool directly from the sheep. The only thing to do is to untwist a number of the threads and find out something of the average length of fibers of which they are constructed. If they are made up almost entirely of short fibers held together by a few scattering long ones, the fabric is a mighty poor one, and is doubtless constructed largely of noils or shoddy. If the short fibers are of many different shades or hues they are

pretty certain to be shoddy. The longer the average length of the fibers found in the threads the better will the fabric be likely to wear.

These directions to the flock owner who is buying fabrics suggest a campaign of education which the Wool Growers could undertake for the purpose of teaching the consumers how to discriminate against wool substitutes. Such a campaign might, however, act as a two-edged sword, since teaching the consumer to demand worsteds, for every possible use would not be likely to help out the demand for clothing wools which are more or less of a drug on the market even now.

Be this as it may, it shows that the man who continues to grow short wool is thereby placing himself in direct competition with the shoddy maker. And until we can be sure of a workable pure textiles law he would do well to breed for longer staple.

WOOL SCOURING.

As the true value of all wool raised the world over depends entirely upon the amount of clean or scoured wool it will produce, the scouring of wool should be of interest to all sheep men.

When wools are bought from the wool producer the price paid is based on the clear cost of the wool. This is determined in our country and practically everywhere by the buyer who from his past experiences is supposed to be capable of estimating very closely what the yield of clean wool will be. When these same wools gets in the hands of the wool dealer and he is ready to sell, the manufacturers buyer, either buys the wool on his estimate of shrinkage or else upon an actual test made at his own plant or at some commission scouring mill.

Very often where wool is purchased on an estimated shrinkage the buyer underestimates same and his wools cost him too much when clean. In this case, if the buyer is a dealer he has either to sell the wool at a loss or wait for some other buyer to make a mistake and help him out on it. If

a manufacturer makes the mistake it of course results in a straight loss to him.

Besides the shrinkage many other things enter into determining the value of the scoured wool. Some of the most important factors are grade, length of staple, color, defect, etc.

In preparing wools for scouring they are sorted by hand according to these features and then each sort is scoured, dried and packed separately and marketed or used according to its particular qualities.

The sheep man then cannot be too careful in the care of his sheep and putting up of his wool, if he wants to get full value for it.



A Champion Hampshire Ram owned by Walnut Hall Farms, Donerail, Kentucky.

Keep the "Burrs" and other vegetable matter out of your wool; pack your tags and black separately, keep the wool dry, tie carefully with paper twine, as all these things are considered in determining what your wool is worth.

The scouring machine tells the dealer or manufacturers how you have cared for your sheep and wool and you are paid accordingly.

With "free wool" the grower must be more careful than ever if he is going to compete with the foreign wool producers, as they look out for all these features very carefully.

BOYONTON WOOL SCOURING CO.

POTATO QUARANTINE.

In almost all foreign potato-growing countries of importance there exists a serious potato disease known as powdery scale. This disease is very destructive in Europe and Canada. It is highly infectious, so much so that infected seed potatoes will leave the ground infected for many years and no cure or control for the disease is known. Under these circumstances the secretary of agriculture has continued the quarantine against the importation of potatoes from Canada and all European countries. This will be a blessing to the farmers of the Atlantic states where the competition of

imported potatoes would be most felt under the new tariff law which places them on the free list.

The independent packers of Australia are endeavoring to create a sentiment against admitting American packers to that country. Eleven hundred pound steers now sell in Australia at \$45 per head. They will advance about \$20 per head within two years after our packers enter that territory. The independents seem to know this.

Get a new subscriber for the Wool Grower.

MONEY MAKERS FOR SHEEPMEN

Stewart Shearing Machines

**give you more
and better wool**

They get all the wool without second cuts, the Fibre is longer and uniform in length, your clip brings a higher price and your sheep are not injured in shearing.

Kemps Branding Paint

The only brand that will scour out, and does not injure the wool. Black, Red, Green and Blue carried in stock.

Complete Line of Parts

for Stewart Shearing Machines
carried in stock at all times.

Cooper's Sheep Dips

The most reliable dip.—Destroys scab ticks, lice, etc. with certainty. Its use is permitted in all official dippings for scab.

WOOL BAGS

FLEECE TWINE

SALT LAKE HARDWARE CO.
SALT LAKE CITY, UTAH

The 

Knollin Sheep Commission Co.

Handles

Nothing But Sheep

Therefore they are in a position to give
Sheepmen the best service at

Chicago - South Omaha - South St. Joseph - Kansas City - Denver

JUDGING MERINOS AT AGRICULTURAL FAIRS.

A year ago I decided that I would not show my sheep at any fair where they would not let the exhibitors know who was to judge the sheep. The result was that I made a show at only two fairs.

I believe that all exhibitors of livestock have a right to know who is to pass judgment on their stock. Some fairs in their premium lists say the judge is an "expert." Let the name of that expert be at the head of the premium list and then the exhibitors can judge whether he is an expert or not.

There is a growing tendency with some fairs to have a college professor judge not only the coarse wools, but also the fine wools. While I have seen splendid work done on the coarse wools, they always "fall down" when they judge fine wools. Merino sheep have more points than any other animal that I know of, both good points and bad points; and only a breeder of Merinos can distinguish which is good and which is bad. I was a looker-on at one fair where a college professor was judging Merinos: class A, rams two years old and over. He made the awards without asking the exhibitors to turn their sheep down so he could see their under sides. When asked why he did not have them do so, his reply was that he could tell what they had on their under sides without an examination. I asked him why he did not ask them when their sheep were shorn (as I knew there was several months' difference in the time they were last shorn), his reply was that he did not care to hear them lie.

When a society in their premium list say that all Merino sheep shown in classes A, B and C must be sheared close and even on or after January 1st of the year they are exhibited, if the judge has any doubt about their being shorn within the year he should require the exhibitor to furnish proof to the society before he can draw his pre-

mium money. Also, in a pen of four lambs, get of one sire, the exhibitor should show a certificate of registration from the secretary of his association.

I am satisfied that there are more good sheep ruined of their usefulness by being over fitted for the fairs than by neglect, as I know of one exhibitor who begins fitting his sheep several months before the fair season opens. They are oiled and singed and blanketed at all times except when they are being judged. They must have the best of alfalfa hay, roots and cabbage, and blankets hung up in front of them



D. O. Lively, Livestock Director Panama Exposition
Now in South America Creating Interest in
the Exposition.

if it is an open pen, so the wind cannot strike them.

After a year or two of such treatment, if they should be sold to a foreign country and should be turned out on the plains without any care, they will be of no value to the purchaser. At a meeting of the American and Delaine Society at Columbus a few years ago, after the business meeting was over we had what the old soldiers call a "smoke-talk," and among other

things I was asked how I fitted sheep for the fairs. My reply was, that when it was time to take sheep to the fair I got them up in the barn, backed my wagon up to the barn, went in and picked out such sheep as I wished to show, loaded them into my wagon and started for the fair; when the fair closed the sheep were returned to the farm and put in with the flock. This statement was received with derisive laughter by the young men of Ohio, who are used to treating their sheep different. But my statement was true, nevertheless.

I never used a blanket on my show sheep except one year, and these sheep being shipped by express to the different fairs, I used cotton-oiled blankets on them, and the weather proving very warm the sheep seemed to suffer much more than without them; and for this reason I have discarded blankets.

E. N. BISSELL,

East Shoreham, Vermont.

October 18, 1913.

A NEW SHEEP BREEDER.

Hon. A. W. Rucker of Denver, Colorado, whom the sheepmen will recall as the democratic congressman who made such a strong fight for them in Congress two years ago, has gone into the sheep business. Mr. Rucker has purchased a small flock of registered Hampshires and likes them very much. The sheep are kept on his farm near Denver the year round, and on January 15th several of his ewes had already lambed. Last year his lambs weighed around 145 pounds by September, and he hopes to make them heavier this year. We are very glad to welcome the ex-congressman to the ranks of the sheepbreeders and hope that he does not remain an ex-congressman very long. We do not think he will.

The railroads charge 72 cents per hundred on wool from Huntington, Oregon, to Portland, a distance of 404 miles. But Australia wool is hauled from Pacific coast points to Boston, a distance of 3,000 miles, for 80 cents per hundred.

The United States Department of Agriculture has now the best press bureau they have ever had. Three times as much information about the department is sent out now as during the reign of Secretary Wilson.

SHEEP FEEDERS, ATTENTION!

Grain Screenings, the best and cheapest feed for sheep. Write us for prices and samples.

SPAULDING ELEVATOR CO., - Warren, Minn.

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MISBRANDING OF A DIP AND A SPRAY.

Notices of judgment have been issued by the secretary of Agriculture in the cases of the United States vs. 50 cases of "Chloro-Naphtholeum Dip," and the United States vs. The Crown Chemical company, under the Insecticide act of 1910.

In the first case the government asked for the forfeiture of fifty cases containing cans of a misbranded insecticide called "Chloro-Naphtholeum Dip" found in the possession of the West Disinfecting Co., Atlanta, Ga. Misbranding was alleged in that the cases branded as containing one-gallon cans of "Chloro-Naphtholeum Dip" contained cans containing on an average less than one gallon; and that the packages branded as containing one-half gallon cans, contained on an average less than one-half gallon; that the packages branded as containing quart-cans contained cans containing on an average less than one quart of the insecticide.

The West Disinfecting company entered an appearance May 1, 1913, claimed the goods, admitted the allegations of the libel, and consented to a decree of condemnation. A decree was entered adjudging the article misbranded as alleged in the libel, condemning the goods, and ordering the same labeled in conformity with the law and sold by the United States marshal; except that the goods should be delivered to the West Disinfecting Co. upon payment by the defendant of all costs of the libel and the execution and delivery of a bond in the sum of \$200 that the said goods would not be disposed of in violation of the law.

In the case of the United States vs. the Crown Chemical Co. an information was filed on October 12, 1912, alleging the shipment by the Crown Chemical Co., Grayling, Michigan, on May 15, 1911, of a quantity of a misbranded insecticide called "Crown Animal Spray" from the state of Michigan into the state of Missouri. Misbranding was charged in that the

packages were labeled as containing one gallon, net measure, whereas examination of specimens by the United States Department of Agriculture showed that the contents of the packages were less than one gallon, the average contents of the packages examined being .9058 of one gallon.

Upon the case coming on for trial April 29, 1913, the defendant, the Crown Chemical Co., appeared and entered a plea of guilty and the court imposed a fine of \$50 and costs.

BRANDING ENGLISH SHEEP.

Apart from the method of ear marking, which is not widely practiced in this country, the most general method of marking sheep so that they may be easily identified is that of smearing some part of the fleece with either, tar, pitch or red ochre. Which of these substances is used depends altogether upon the time of the year, and the most frequent practice is to mark the sheep with tar or pitch immediately after shearing, and to renew the impression then made with red ochre when the winter season is commencing. Anyone who is well acquainted with sheep and their wandering propensities will understand quite well the practical utility of marking. There is, however, another side to the question which needs to be considered, that is the effect which the substances used for marking produces upon the fleece from a manufacturer's point of view. It is becoming more widely known even among wool growers in this country that the use of tar is injurious to the wool, because it cannot be got out in the scouring process, and the only way to get rid of it is to cut off the pieces of wool to which the tar is adhering. This necessarily reduces the quantity of genuine wool which the buyer secures, and raises the actual price per pound of the material. The reason why tar is so commonly used is that when it once becomes attached to the wool, it cannot be removed so a permanent mark is made which rain and other weather influences cannot eradicate. This is



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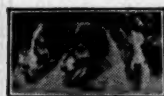
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all right from the farmer's standpoint, as a permanent mark is of great value, but what we have already said respecting the manufacturer's point of view shows that the system has its disadvantages, and we may say that these are so real, involving such serious loss to wool users, along with such an equally serious depreciation in the value of the wool to the grower himself, that it is well worth considering what other means of marking sheep may be used. Various preparations have been placed upon the market from time to time that claim not only to be permanent, but also that they will come out when the wool is scoured. Such claims as these have a very ludicrous aspect as they strike the practical mind as being diametrically opposite. We think a very easy and practical solution which should be satisfactory to both growers and users is to abandon any use of tar and pitch and be satisfied with red ochre. The writer sees no reason why these should not be used after shearing in exactly the same way as tar. A mixture of oil and red ochre made up in paint form will last a considerable time, and yet will gradually wear away altogether. This is just exactly the kind of mixture which answers all practical purposes. The effect that the tar mark is renewed with another kind of substance a few months after it has been put on the wool is a very strong argument why it should not be used at all. The tar being black is not readily seen at a distance when the wool has grown to a considerable length. Consequently the necessity for the use of brighter colored means of identification, and we repeat that this might as well be used at the beginning. This we think is the most practical method of solving the tar marking question, and though we should welcome the appearance of any other substances which are convenient for use or better adapted for this purpose than the one we have suggested, we think red ochre applied with oil is quite satisfactory.

In Scotland this red ochre is obtain-

able at the stores in lumps or balls, and applied in the dry state. This marking lasts a month or two and is known as the "Kiel" mark. It is soon applied when the sheep are in the pens, and serves a very useful purpose. This ochre is very cheap, only being a few cents per pound.

—Bradford Correspondent.

LONDON WOOL PRICES.

The Annual Wool Review, published by Helmuth Schuartz & Co., prominent London wool brokers, gives the following as the average price of scoured wool in London for many years on December 31st. The figures are in cents per pound:

	Port Phillip Merino.....	S. Africa Clothing.....	Australian Medium Crossbred.....	Australian Coarse.....
1895	41	27	30	29
1899	67	48	40	25
1900	39	27	25	19
1901	42	28	22	13
1902	55	35	30	18
1903	50	35	32	22
1904	54	38	38	32
1905	56	41	41	32
1906	57	42	42	34
1907	54	40	37	27
1908	53	35	33	21
1909	57	41	42	27
1910	55	41	39	27
1911	53	38	36	26
1912	58	41	40	30
1913	57	42	37	29

In comparing these figures with prices of domestic wools the reader should not lose sight of the fact that with the exception of the Port Phillip Merino given in the first column the other grades are not strictly comparable with our grades. The Port Phillip compares with our best western Merinos. The South African clothing is similar to our Territory clothing, but is inferior to it in value. The Australian Medium crossbred is difficult to convert into our terms. Of course, the prices here quoted will not be the price of the same wool in Boston for to determine the latter price the cost of buying, transportation, insurance, etc., must be added. This amounts to a considerable item per clean pound.

GOVERNMENT SHEEP**ESTIMATES.**

The department of agriculture has just issued its estimate of the number and value of sheep in the various states as compared with January 1st last year. It estimates the value of Utah sheep on January 1st this year at \$3.90 per head as against \$4.10 per head at the same date last year. This indicates that Utah sheep have declined twenty cents per head during the year. The figures given for Idaho show the sheep worth \$4.20 per head this year as against \$4 last year. A gain of 20 cents per head. We don't want to fall into the class of fault finders, but we are at a loss to understand why Idaho sheep went up and Utah sheep went down within the year. Our judgment is that there is nothing wrong with the sheep of either state except these figures.

BRED EWES FOR SALE.

From several points in Oregon and Montana, we have received letters from sheepmen to the effect that they had a considerable number of ewes for sale for spring delivery that are due to lamb in April and May. Most of these ewes have been bred to coarse rams and they should meet with a ready demand.

SHEEP FOR SALE

We have 2500 two year old ewes for sale for delivery about April 1st. These ewes are one-half Cotswold and are bred to registered Shropshire bucks to lamb in May.

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MONDELL GRAZING HOMESTEAD BILL.

On another page of this paper we publish the land leasing bill now pending before the public lands committee of the House. Below we give the text of the Mondell Grazing Homestead bill also pending before the public lands committee of the House.

We are advised by telegram that hearings on both of these bills will be opened before this committee on March third and it will be necessary for the sheepmen to be represented. Many western senators and congressmen favor the passage of the grazing homestead bill. It will be noted that this bill provides for a homestead of 1280 acres and a few of them judiciously located would soon end the range sheep and cattle industry. Such a homestead would open the flood gates of fraud, as phoney entries would be made all over the range country with the result that many of the smaller stockmen would soon be driven out of business. On the range that now remains unentered an actual settler could not make a living on a homestead of either one or two sections. They would not find this out however until the existing rights on the public range had been destroyed and then it would be up to the stockmen to buy out these holdings. Below we give the full text of the Mondell bill.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That from and after the passage of this Act it shall be lawful to make grazing homestead entries on lands which have been designated by the Secretary of the Interior, as grazing homestead lands, which homesteads shall be of such maximum area as shall be fixed by the said Secretary with a view of providing a homestead of sufficient size to, in his opinion, support a family: Provided, That no such maximum entry shall be less than six hundred and forty nor more than one thousand two hundred and eighty acres in extent, and in all cases reasonably compact in form.

Sec. 2. That the Secretary of the interior is hereby authorized, on application or otherwise, to designate lands the surface of which is, in his opinion, chiefly valuable for grazing, which do not contain merchantable timber and which are not susceptible of irrigation from any known source of water supply, as subject to entry under this Act, and he shall fix the maximum area of such entries as provided by section one of this Act.

Sec. 3. That any qualified homestead entryman many make entry under the homestead laws of lands designated by the Secretary as provided by section two of this Act of not to exceed the maximum area fixed by the Secretary for the lands entered, and secure title thereto by compliance with the terms of the homestead laws: Provided, That in lieu of cultivation as required by the homestead laws the entry man may place upon his lands permanent improvements tending to increase the value of the same for agricultural and stock-raising purposes of the value of not less than \$1.25 per acre.

Sec. 4. That the title to lands of the character described in section two of this Act, which have been designated as therein provided may be acquired, in reasonably compact areas and not in excess of the maximum of entry for such lands, by homestead entrymen or owners of adjacent and contiguous lands as supplemental grazing entries on proof of the improvement of the same as provided in section three of this Act and on payment of the sum of \$1.25 per acre in not to exceed five annual payments.

Sec. 5. That the Secretary of the Interior is hereby authorized to make all necessary rules and regulations, in harmony with the provisions and purposes of this Act, for the purpose of carrying the same into effect.

If you have not sent in your five dollar dues to the National Wool Growers Association, we hope you will do so at once. Many sheepmen who intend to pay their dues, put the matter off from time to time and the association is put to greater expense for postage.

NATIONAL FOREST IN THE EAST.

Some years ago Congress made an appropriation for the purchase of land in the Appalachian mountains for the creation of a forest reserve. Under this appropriation about 700,000 acres of forest land have been purchased in Kentucky and Virginia at an average cost of \$5.07 per acre. While this is probably more than these lands are worth for commercial purposes they are worth fully this much to the government for forest purposes, especially since they have been selected on some of the most denuded watersheds. We want to encourage this idea of forest reserves in eastern states, for as much timber can be grown there in 50 years as can be grown in this inter-mountain country in 200 years. These eastern mountain lands are worthless for anything except timber growth while similar lands in the west are the best available grazing lands. Let us conserve timber and water power in the eastern mountains and devote similar lands in the west to the conservation of grass and livestock.

LIVESTOCK IN ALASKA.

For several years the United States Department of Agriculture has been conducting experiments in Alaska to determine its suitability for livestock production. It has now in that territory a small herd of Galloway cattle and a flock of coarse woolled sheep. More than a year ago volcanic eruptions on the Kodiak Island made it necessary to move the cattle to the state of Washington. The ranges where the cattle grazed were covered with volcanic ash to a depth of one foot. As a result all grazing was destroyed and several animals died of starvation. It is proposed to move the stock back to Alaska as soon as grazing is again available, which will be some time this fall. There is no reason why Alaska should not produce all the meat she consumes.

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MEXICO MEAT PROHIBITED.

On January 24th, the Secretary of Agriculture issued an order that in effect prohibits the importation of meat from Mexico. The department has found that the system of inspection in that country was not equal to that maintained in the United States.

WEATHER CONDITIONS.

We have reports from many sections of the range sheep country to the effect that winter conditions have been unusually favorable for the production of a high class clip of wool. Some severe weather has been experienced in Wyoming at points west of Laramie. However, it seems that the sheepmen in that section are prepared to feed and no loss is anticipated. In fact the sheep were in high condition when the storm came and with cottonseed, corn and hay, they will be carried through without injury to either sheep or wool.

COTTONSEED.

As a result of the information published in the National Wool Grower last fall about the use of cottonseed cake, we are advised that many sheepmen are using the feed with very satisfactory returns. We hope that those who have used this cake will publish the results in the pages of the National Wool Grower in order that others may have the benefit of their experience.

SHEARING IN ARIZONA.

We are advised that shearing is now in full swing at many points in Arizona and that wool buyers are on the ground but that little wool had been bought up to February 15th. The growers feel that they should have a good price for their clip especially since their wool is the first to go on the market and the market is badly in need of it.

Do not fail to use paper twine this year. It is cheaper and better than jute twine.

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THE DOG QUESTION.

Worthless dogs have long been a great menace to the sheep industry of the farm states. Recently several of the Eastern sheep associations have become insistent that legislation be passed to abate this dog nuisance. Shortly before the Chicago International of 1912, the National Wool Growers' Association suggested to many Eastern sheep associations that a joint meeting be held in Chicago to devise ways and means of solving this dog problem. Any state legislatures were then in session, but nothing came of the movement. We hope that the present campaign may have better results.

The proper solution of this dog question is very difficult of attainment, National legislation is out of the question, for it is not a matter over which federal authority could be exercised. It must be handled by the individual states. In fact most states already have laws effecting the subject, but they are either inadequate or else not enforced, generally the latter. Before new legislations is attempted, a conference representing all eastern sheep associations should be held and the sheepmen should agree, not on the kind of legislation they want, but on the kind of legislation they can get which would be most effective.

So far there has been a score of schemes put forward, some of which can never be enacted into law and others which if enacted would not solve the problem. It has been suggested that the law should require all dogs be tied up at night. This, of course, would prevent sheep killing, but it is very doubtful if any state legislature could be induced to pass such a law, or if it was passed, no officer would enforce it. The whole dog owning public, and it is a large one, would answer that they kept a dog as a night guardian and it would be worthless for such purpose if tied up. While not one dog in a hundred thousand is worth a snuff as a watch dog, yet the owners believe that they are and this will be sufficient to stop any legislation along the lines suggested. It has

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been suggested that the laws should require all dogs to have the owners name on its collar. It does not appear to us that this would be of much assistance as not in one per cent of the cases is the sheep killing dog detected while he is at work. Anyway you could not establish the identity unless you actually caught or killed him, in which case his ownership can easily be established without finding the name on the collar. It has been suggested that laws be passed to prevent people from keeping dogs. Such a law would be good for the owner of the dog and good for the dog itself, but it would never be passed.

The sheep killing dog works mostly at night and seldom does he work alone. The criminal dog like the criminal man, likes company. The man who owns but one dog need have but little fear that he has a sheep killer. The man who owns two or three dogs if he lives in a community where sheep are being killed, may well look on them with suspicion. The lone dog generally spends his nights at home, but as the number of dogs increase, so does the desire to prowl around. It is on these prowling expeditions that the band of sheep is encountered in the back field, and, as they are easily frightened, the desire of the dog to kill is aroused. Therefore, if this be true, the first purpose of any law should be to reduce the number of dogs owned by each individual. We see no other way to do this except by taxation. If a law could be passed placing a tax of say \$2.00 on the man who owned one male dog and \$4.00 for the ownership of one female dog, or if the man owned two dogs the tax should be \$4.00 on each, and so on increasing the tax per dog as the number of dogs increased. Then the tax collector should issue a metal tag to the owner of every dog upon which taxes were paid and the owner should be forced to see that the dog wears such tag. Then when the taxes are collected, the collector should publish in two papers of his county a full list of the owners of dogs and the taxes paid thereon. This it seems to us would materially reduce the number

of dogs. The scheme of raising the tax rate as the number of dogs increased might meet with constitutional objections in some states. Of course it will be cited that the tax would not be collected, but the same objection could be urged against any scheme that is proposed. The question of law enforcement is one that rests with the sheepmen of the community. The law can be so drawn that it will be mighty uncomfortable for the officer who fails to do his duty, especially if the sheepmen do their duty at election time and thereafter.

Aside from the dog itself, legislation is needed indemnifying the owner of the sheep killed. Some of the laws specify the payment of a specific amount for each sheep. All of them should provide that the owner should be reimbursed the full value of the sheep whether it be \$1.00 or \$100.00 and he should also be reimbursed for any damage done to other members of the flock not actually killed. The owners claim should be paid by the state or county and not by the owner of the dog. The state or county should then proceed against the owner of the dog, provided he is known. In this way the sheepmen will be insured of getting is money without suit and after a few large claims have been paid by the county the tax payers will take an interest in seeing that the dog tax is collected. Especially will this be true if the sheepmen give it the proper publicity. Finally it may be suggested that the less newspaper agitation this dog question receives at the present time the better for the sheep industry. Any general statement as to the number of sheep annually killed by dogs or the publication in the press of specific instances of loss is not going to induce any new man to enter the sheep business and may result in some going out that are already in the business. It has been said that farmers were driven out of the sheep business by tariff agitation. If this be true the farmer will not be induced to take up the sheep industry if we parade before him the probability of dogs killing his sheep. If the time for agitation of this question

comes, it will come a year from now when men are being elected to their state legislature. For the present, if the various Eastern sheep associations will each appoint a delegate and hold a conference upon this dog question and decide upon the most sensible course to pursue they will be doing all that can be done.

The National Wool Growers' Association is now, as always, willing to assist the Eastern sheepmen in securing any kind of a reasonable dog law.

A PROPER DOG LAW

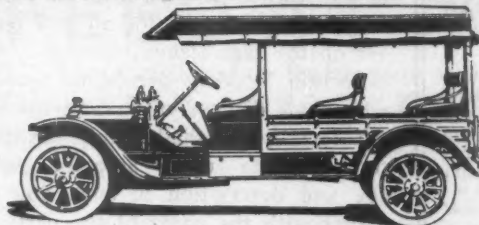
Below we submit a rough outline of the features that should be embodied in a dog law. This is not submitted with the idea that it is complete or that it contains any details, but merely with the thought that some of its features may prove desirable in the farm states.

BE IT ENACTED:

Section 1: It shall be the duty of each county assessor at the time of making other assessments to levy an assessment on the owner of one male dog of \$2.00 and for each additional male dog owned by the same individual, or minor member of his family, an assessment of \$4.00 shall be levied on each female dog whether spayed or unspayed an assessment of \$4.00 shall be levied, said assessment to be levied on all dogs over three months of age; said assessor at the time of making such assessment shall record the color, size and breed of each dog so assessed.

Section 2. It shall be the duty of the tax collector in the same manner as he issues his receipt for other taxes, to issue to the owner of each dog upon which taxes have been paid a metal tag bearing a serial number; such tag to be not less than one inch wide or less than one and a half inches in length, said tags not to be of the same color any two successive years. In the event that any tag on which taxes shall have been paid shall become lost, the tax collector on receipt of affidavit from owner of said dog shall issue a duplicate tag; it shall be the duty of said tax collector to publish in two county papers a list of the dogs so

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ITS USE PERMITTED IN ALL OFFICIAL DIPPING FOR SHEEP SCAB.

One Gallon makes Two-hundred Gallons for Ticks, One Gallon makes One-hundred twenty Gallons for Scab. Order of \$10.00 or over, Freight Paid. On Sale throughout the West.

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assessed, giving the name and address of the owner of each dog, together with the sex of each dog and the number on the tags issued therefor.

Section 3. Any person or persons who shall dispose of in any manner any female dog shall within ten days report to the county assessor giving age and description of such dog together with the name of the party to whom such dog was delivered.

Section 4. All moneys collected by the taxes herein provided for, shall be deposited in a fund to be known as the Stock Indemnity Fund; such fund to be used for the purpose of paying the indemnity hereinafter provided for. Whenever any livestock shall be killed, maimed or harassed by dogs in such a manner that its value is injured, the owner shall report such injury to a Justice of the Peace who shall in turn summon three owners of the same kind of stock to appraise the indemnity that such is entitled to receive, such indemnity shall be levied on the basis of the actual value of the stock injured; on receipt of the affidavits of said appraisers setting forth with damage done to the aggrieved party, the Justice of the Peace shall advise the proper county officer who shall in turn issue a warrant to the owner of the damaged stock for the full amount of said appraisal; such warrant shall be drawn on said Stock Indemnity Fund, but if such fund shall not contain sufficient money, the said warrant shall be drawn against the general fund of the county.

Section 5. It shall be the duty of the county attorney to investigate all losses above specified and to determine, if possible, the owner or owners of the dogs responsible for such loss; when such owner is apprehended, it shall be his duty to bring suit against him in the name of the county for the amount of the indemnity paid to the injured party, together with all costs incident thereto, all moneys so derived aside from the costs of the suit, to be deposited in the fund from which the owner of the damaged live stock had been paid.

Section 6. It shall be the duty of the owner of all dogs subject to taxa-

tion to cause such dogs to wear a substantial collar and on receipt of the tax tag herein provided for, the said tag shall be affixed to the proper collar in a secure and substantial manner; in the event that such tag shall become lost, the said owner shall forthwith make affidavit to the tax collector setting forth the facts of the said loss.

Section 7. Any person or persons who shall misrepresent the age, sex or description of any dog or the number of such dogs owned by him, or who shall fail to provide a collar for such, or who shall fail to attach the tax tag to such collar, or who shall fail to report the loss of such tag, or who shall in any manner violate any of the provisions of this act shall be subject to fine not less than \$50.00 or more than \$100.00.

A GOOD CONVENTION.

Your national Wool Growers Convention was one of the best meetings of livestock men that I ever attended. The sheepmen seemed to take much interest in the proceedings and few of them missed a session. I am glad to belong to an organization that can show the good work done for the industry that has been done by the National Wool Growers Association. The publicity that this organization has given to the value of mutton as a food will put money into the pockets of every sheepman. My only regret is that we did not start the campaign many years ago.

F. M. ROTHROCK,
Washington.

**GREAT BRITAIN'S
SHEEP EXPORTS.**

The year 1913 was one of the best years Great Britain has had so far as the exportation of purebred sheep are concerned. During that year 6,538 purebred sheep were shipped to various parts of the world. 836 of these came to the United States at an average export value of \$34.75. 3,025 went to the Argentines at an average value of \$95; 123 head to New Zealand at \$115.00 each; 424 head to Canada at \$34.00 each.

NOTES OF THE SHEEP TRADE.

February market did not open auspiciously for the feeder. During the first week of February, trade was in a very delapidated condition. From all points of the compass came a run of stuff good, bad and indifferent and the poorer it was, the better it sold. The 8 cent lamb took the count, and Colorado feeders regarded the prospect with alarm. Iowa, which, according to the forecasters, was to have been all in by the middle of January, was still furnishing train loads early in February, and according to reliable advices, held considerable stuff back. Colorado filled feed lots at big prices, has been under an enormous feed bill all winter, not to speak of bad feeding conditions due to deep snow, which, melting every day, would soon mire the stock, but for the use of an enormous amount of bedding. The February prospect at the outset was decidedly blue and there was apprehension of a repetition of the big January run. Colorado conditions are such as to furnish incentive to top the stuff out as rapidly as possible, which means marketing heavy lambs that are decidedly unpopular. During the first week of February many lambs weighing around ninety pounds had to sell at \$7.25 to \$7.30, and it looked like stealing when this stuff was contrasted with the counterfeit class that was bringing as much money merely because it lacked weight. While killers excuse discrimination against heavy lambs on the ground that the public wants light stuff, they have not been made to explain why they turned down finished 80 to 85-pound lambs at \$7.75 to buy the counterfeit class at \$7.25. To an observer, it looks like a palpable effort to hold down paper costs; an absurd fashion buyers have. Paper costs is petitious and the system should not be tolerated at headquarters. Similarly they pay \$7.00 for little 55 to 60-pound lambs that never had a square meal and are worth intrinsically \$1.50 per hundred less than 90 pound Colorados selling at \$7.25 to \$7.30. Unskillful buying is the cause of much sheep market adversity.

FEED AT ASHTON

I have purchased the feeding yards at Ashton, Illinois, on the line of Chicago & Northwestern Railway. **Finest grazing, sheds for feeding hay and grain, good shearing plant.** I am a practical stockman and assure all who use these yards the best possible service.

W. H. SANDERS.

Give ASHTON YARDS a trial.

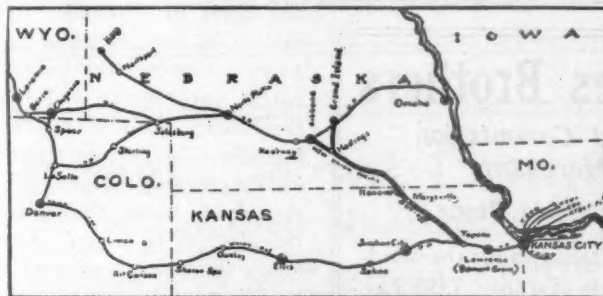
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The Freight rates to Kansas City are exactly the same as to any other Missouri River market. The rate to Chicago via Kansas City is the same as via Omaha, and the distance from Kansas City is 34 miles less than from Omaha.

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**SUBMIT SAMPLES AND WRITE FOR FURTHER PARTICULARS
LONG WOOL EXCLUSIVELY**

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From the killers standpoint, and no argument sufficiently plausible to palliate it has ever been advanced. Owing to the high feed bill last season, finishers were warranted in expecting premiums, but so far they have been grievously disappointed. If killers do not want a finished article, the sooner they get together and pass a resolution to that effect, the better.

Suspicion is growing that Iowa feeders bought more western sheep and lambs on the range and sent them direct to feed lots last fall, than they were generally credited with. With the single exception of Colorado, Iowa is now easily the banner mutton finishing state, and it is crowding close on the heels of Colorado. This year a swarm of new operators got into the game. One reason being that stock cattle were scarce and high, another that sheep made money the year before. Regular feeders regarded the big fall purchasing movement sceptically, the result being that many of them were unable to fill up. The big movement approximating over one million head is well distributed over the state, every county taking some and Chicago commission houses that handled

few sheep ordinarily have been astounded at the receipt of ovine stock from customers that usually sold cattle. Inquiry elicits the information that they were either bought at Omaha or out on the range. The Iowa movement has had a demoralizing influence on the winter market for the reason that commission houses could not control it as they can the run from Colorado feed lots, which is held at nearby feeding stations for an opportune moment to go to market. Iowa feeders watched the trend of prices and ordered cars when the occasion seemed to warrant, the result being a series of gluts. On the first Monday in February, commission houses ordered in considerable stuff from the feed lots anticipating that little would be available from any other source, but Iowa reported and the hopper was filled to overflowing. In a meteorological sense, Iowa has fared much better than Colorado this season. Weather conditions having been superb for outdoor feeding and very satisfactory gains have been made with the cheapest kind of feed, corn on the stalk.

J. E. P.

**RAILROADS INTERESTED
IN LIVESTOCK.**

In our state there has been a great and widely spread interest in corn growing and some of us have protested saying: "West Virginia hills were not made to be plowed up and cultivated. The abundant growth of Kentucky Blue Grass plainly shows that these hills were meant for grazing." The Baltimore & Ohio railroad, which goes through many sections, has just decided to assist us by presenting worthy boys in each county with a pair of lambs, either fine or coarse wool. I am writing you about this so that in other states not well adapted to the plow but well set to grass the railroads would be sowing their own harvest by promoting the livestock interest.

S. C. GIST,
West Virginia.

WOOL MARKET STRONG

The following is taken from the Daily Trade Record of January 30th:

"For two years there has not been the activity in the wool market of the United States that there is now. Mr. Adams, of Brown & Adams, said to me a couple of days ago: 'We are now keeping out of loses and we must consider this very good. We are most sold out.'

"Two weeks ago I reported the attempted contracting of domestic wools for the new clip. Today I can report a large contract made for the new clip of about 2,000,000 pounds of Montana wools, at an eighth of a cent more than what similar clips bring. This is more of a binder than a contract because the party in question likes a certain section of wool from Montana. All the other attempts to contract have been fruitless."

**SHEEP IN
NORTHERN MONTANA.**

There is not within 30 per cent as many sheep in northern Montana today as there was in 1912. Some of the smaller outfits that did not own their range shipped everything they had last fall. The larger outfits cut down their flocks but will be able to stay in the business for a long time because they have large land holdings. In the vicinity of Chinook the dry farmers are getting pretty thick, some of them have located as much as thirty miles south of the railroad. These men are going to try and raise wheat and flax but they only had a small crop this year. It is too soon as yet to say whether they can make it stick or not.

In our section there is going to be a good many breeding ewes for sale. These ewes were bred so as to begin lambing about May 10th, so that they will be sold for April delivery or sooner. There will also be a goodly number of yearling ewes to offer. We are using Cotswold and Hampshire rams so that these bred ewes should prove valuable to the lamb raisers of Idaho and Montana.

W. R. HENSEN, Montana.

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R. A. JACKSON, President,
Dayton, Washington.

DWIGHT LINCOLN, Secretary,
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American & Delaine-Merino Record Ass'n.

This Association annually publishes the increase of the flocks, keeping the lineage by name and number of every animal so recorded.

S. M. CLEAVER, Secretary,
Delaware, Ohio.

THE MONTH'S SHEEP MOVEMENT.

January receipts of sheep and lambs at the six principal western markets were the largest on record for the month.

	1914	1913
Chicago	485,228	449,591
Kansas City	160,530	157,177
Omaha	226,333	207,667
St. Louis	63,072	76,346
St. Joseph	67,719	46,589
Sioux City	54,734	20,032

1,057,616 957,402

The big run is easily explained. Feed was high and finishers were disposed to unload at every opportunity that looked favorable. Every state in the cornbelt shied its castor into the ring, but Iowa was the big contributor.

The figures are not calculated to form a mutton scarcity theory, but the stuff went into feeders' hands last fall and logically had to come out, although few in the trade expected such a deluge.

J. E. P.

PROSPECTS FOR IMPORTED MUTTON.

So far very little mutton has been imported, but there are signs of a swelling movement. As Robert Matheson explained it, sheep and lambs have been relatively cheaper in the United States than elsewhere, making importing impracticable. This has been especially the case with mutton, which is the meat South America and Argentine importers handle mainly. The first week of February witnessed the arrival at New York, however, of the largest mutton shipment that has arrived since free trade went into effect. It consisted of 6,491 carcasses of foreign mutton and 1,759 carcasses of frozen lambs. Buenos Ayres advices are that during the next three months considerable frozen mutton will be loaded at that port for New York. Since January first, loading there for the United States ports aggregated 31,000 carcasses.

Great Britain is showing concern over its foreign mutton supply, fear-

ing that the United States will outbid it. Last year Great Britain imported 162,661,000 pounds of foreign mutton against 96,567,000 the previous year, and any material supply curtailment from outside sources would seriously effect consumers. How much mutton Great Britain eats is indicated by the fact that 1913 imports were equal to 10,677,261 sheep. For every animal the British grower of pedigree sheep sent abroad John Bull bought 1,275 head to satisfy his ravenous mutton appetite. British mutton imports last year were equivalent to a weekly purchase of 250,320 sheep, and if the American public consumed mutton in the same proportion, three animals could be utilized where there is a market for one at present.

Argentine and Australia furnish the bulk of Great Britain's imports. Australia being credited with 72 per cent and Argentine with 23 per cent of the whole. Details of the growth of British import mutton trade of recent years follow and are interesting.

Australia, Argentine, New Zealand and Uruguay.

Year	Mutton Cwts.	Mutton Cwts.
1913	3,866,384	1,185,470
1912	3,143,101	1,639,690
1911	3,273,163	1,858,689
1910	3,629,572	1,510,138
1909	2,921,776	1,502,989
1908	2,373,640	1,620,309
1907	2,863,304	1,465,224

J. E. P.

MONTANA LAND OFFICE BUSY

The year 1913 was a big one at the Billings land office. The total receipts for the year, as shown by the report issued, aggregated \$429,469.90. There were 1,800 homesteads and other applications received and 830 homesteads granted. Forty-nine final proofs were rejected and fourteen final proofs were protested. Final proofs now in the course of perfection number about 200. The month of December was an unusually busy one, due to the opening of large tracts of land in the Bull Mountains. Three hundred and ninety-nine filings were made.